Thecus N0204 miniNAS

User's Manual

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About This Manual

All information in this manual has been carefully verified to ensure its correctness. In case of an error, please provide us with your feedback. Thecus Technology Corporation reserves the right to modify the contents of this manual without notice.

Product name: Thecus N0204 miniNAS
Manual Version: 1.0
Release Date: April 2009

Limited Warranty

Thecus Technology Corporation guarantees all components of Thecus N0204 miniNAS are thoroughly tested before they leave the factory and should function normally under general usage. In case of any system malfunctions, Thecus Technology Corporation and its local representatives and dealers are responsible for repair without cost to the customer if the product fails within the warranty period and under normal usage. Thecus Technology Corporation is not responsible for any damage or loss of data deemed to be caused by its products. It is highly recommended that users conduct necessary back-up practices.

Safety Warnings

For your safety, please read and follow the following safety warnings:

- Read this manual thoroughly before attempting to set up your N0204 miniNAS.
- Your N0204 miniNAS is a complicated electronic device. DO NOT attempt to repair it under any circumstances. In the case of malfunction, turn off the power immediately and have it repaired at a qualified service center. Contact your vendor for details.
- DO NOT allow anything to rest on the power cord and DO NOT place the power cord in an area where it can be stepped on. Carefully place connecting cables to avoid stepping or tripping on them.
- Your N0204 miniNAS can operate normally under temperatures between 5°C and 40°C, with relative humidity of 0% – 80%. Using the N0204 miniNAS under extreme environmental conditions could damage the unit.
- Ensure that the N0204 miniNAS is provided with the correct supply voltage (AC 100V ~ 240V, 50/60 Hz, 3A). Plugging the N0204 miniNAS to an incorrect power source could damage the unit.
- Do NOT expose the N0204 miniNAS to dampness, dust, or corrosive liquids.
- Do NOT place the N0204 miniNAS on any uneven surfaces.

- DO NOT place the N0204 miniNAS in direct sunlight or expose it to other heat sources.
- DO NOT use chemicals or aerosols to clean the N0204 miniNAS. Unplug the power cord and all connected cables before cleaning.
- DO NOT place any objects on the N0204 miniNAS or obstruct its ventilation slots to avoid overheating the unit.
- Keep packaging out of the reach of children.
- If disposing of the device, please follow your local regulations for the safe disposal of electronic products to protect the environment.

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Chapter 1: Introduction

Overview

Thank you for choosing the Thecus N0204 miniNAS IP Storage Appliance. The Thecus N0204 miniNAS is an easy-to-use storage server that allows a dedicated approach to storing and distributing data on a network. Data reliability is ensured with RAID features that provide data security and recovery—over 1 Terabytes of storage is available. Gigabit Ethernet ports enhance network efficiency, allowing the N0204 miniNAS to take over file management functions, increase application and data sharing and provide faster data response. The N0204 miniNAS lets you hot swap working hard drives, securing the continuity of data in the event of hardware failure. The N0204 miniNAS allows data consolidation and sharing between Windows (SMB/CIFS), and Apple OS X environments. The N0204 miniNAS's user-friendly GUI supports multiple languages.

Product Highlights

File Server

First and foremost, the N0204 miniNAS allows you to store and share files over an IP network. With a Network Attached Storage (NAS) device, you can centralize your files and share them easily over your network. With the easy-to-use web-based interface, users on your network can access these files in a snap.

To learn about the Web User Interface, go to **Chapter 6: Using the N0204 miniNAS > Web User Interface**.

FTP Server

With the built-in FTP Server, friends, clients, and customers can upload and download files to your N0204 miniNAS over the Internet with their favorite FTP programs. You can create user accounts so that only authorized users have access.

To set up the FTP Server, refer to **Chapter 5: Additional Feature Setup > FTP Server**.

Backup Server

Don't leave precious data to chance. With advanced backup capabilities, you can easily upload mission critical files to the N0204 miniNAS, and even automate your backup tasks for true peace-of-mind.

To find out how to backup your files with the N0204 miniNAS, refer to **Chapter 6: Using the N0204 miniNAS > File Backup**.

Media Server

Macrovision's Embedded Media Server resides on the N0204 miniNAS and aggregates personal media so that it was can be accessed by a variety of players, such as network TVs, IP set-top boxes, and digital media adapters. This software is DLNA Certified, which means that increased interoperability with other DLNA certified devices. The software also enables advanced digital rights management, an auto setup wizard, and auto-generating video thumbnails. Mediabolic's Embedded Media Server makes accessing, sharing, and enjoying your media files easy.

To set up the Media Server, refer to **Chapter 4: Additional Feature Setup > Media Server**.

iTunes® Server

Digital music is one of the hottest trends, and with the built-in iTunes® server, you can share your digital music files with every iTunes-equipped PC on your network. The iTunes Server is also incredibly easy to set up!

To set up the iTunes Server, refer to **Chapter 4: Additional Feature Setup > iTunes Server**.

Photo Gallery

The Photo Gallery is a great way for friends and family to share precious memories of vacations, birthdays, and more. Users can upload pictures, and even create their own picture albums right on the N0204 miniNAS.

To set up the Photo Gallery, refer to **Chapter 5: Using the N0204 miniNAS > Using Photo Gallery**.

Web Cam Server

With the N0204 miniNAS's Web Cam server, you can schedule the N0204 miniNAS to capture images from a connected USB webcam at designated intervals.

To set up the Web Cam Server, refer to **Chapter 5: Additional Feature Setup > Web Cam Server**.

Printer Server

With the N0204 miniNAS's Printer Server, you can easily share an IPP printer with other PCs connected to your network.

To set up the Printer Server, refer to **Chapter 5: Additional Feature Setup > Printer Server**.

Superior Power Management

N0204 miniNAS supports schedule power on/off. With this feature, administrator can set at what time to turn on or off the system. This feature is a big plus for people who want to conserve energy.

To schedule system on and off, refer to **Chapter 4: System Management > System Settings > Reboot and Shutdown System > Scheduled Power On/Off**.

Package Contents

Your N0204 miniNAS package should contain the following items:

- Thecus N0204 miniNAS IP Storage Appliance
- DC Power Adaptor
- AC Power cord
- Ethernet Cable
- QIG
- CD-Title

Please check to see if your package is complete. If you find that some items are missing, contact your dealer.

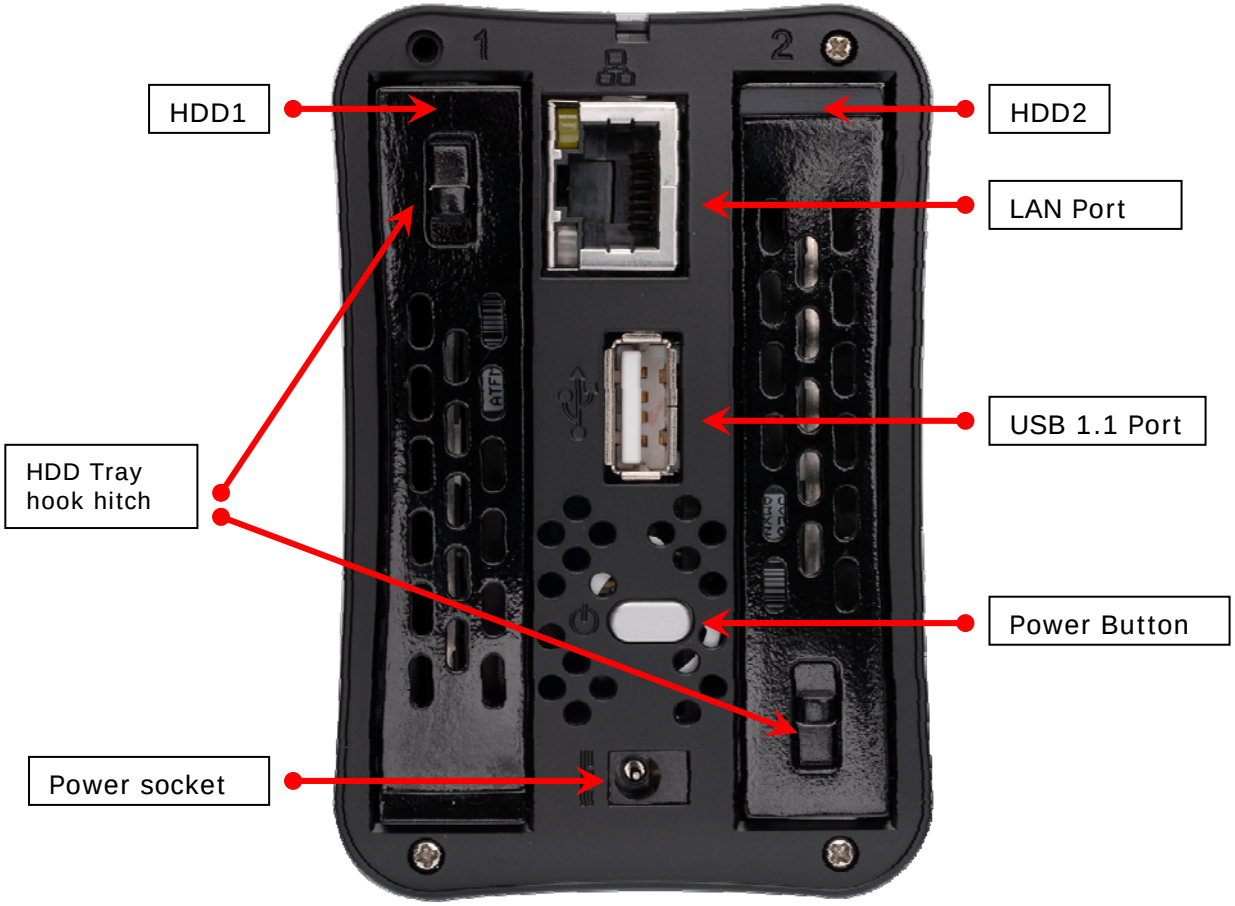
Front Panel

The Thecus N0204 miniNAS's front panel has the USB copy button, indicators, and USB port:

Front Panel	
Item	**Description**
USB copy Button/LED	• Copy USB storage contents to N0204 miniNAS • **Blinking Green:** Copy activity • **Solid Green:** Copy Success • **Solid Red**: Copy Fail
HDD 1 LED	• **Solid Red:** HDD failed • **Blinking Green:** HDD activity
HDD 2 LED	• **Solid Red:** HDD failed • **Blinking Green:** HDD activity
LAN LED	• **Solid Green:** network link • **Blinking Orange:** network activity
Power LED	• **Solid Blue:** system is powered on
USB 2.0 Port	• USB 2.0 port for compatible USB devices, such as digital cameras, USB disks, and USB wireless dongles* **Note**: For supported USB wireless dongles, please contact support@thecus.com

Rear Panel

The Thecus N0204 miniNAS's rear panel features ports and connectors.



Back Panel	
Item	**Description**
USB 1.1 Port	• USB 1.1 port for compatible USB Printer
LAN Port	• LAN port for connecting to an Ethernet network through a switch or router
Power Connector	• Connect the included power adaptor to this connector
Power Button	• Power on/off N0204 miniNAS • **Solid blue:** Device is powered on
HDD Tray hook hitch	• To install HDD 1~2 into N0204

Chapter 2: Hardware Installation

Overview

Your N0204 miniNAS is designed for easy installation. To help you get started, the following chapter will help you quickly get your N0204 miniNAS up and running. Please read it carefully to prevent damaging your unit during installation.

Before You Begin

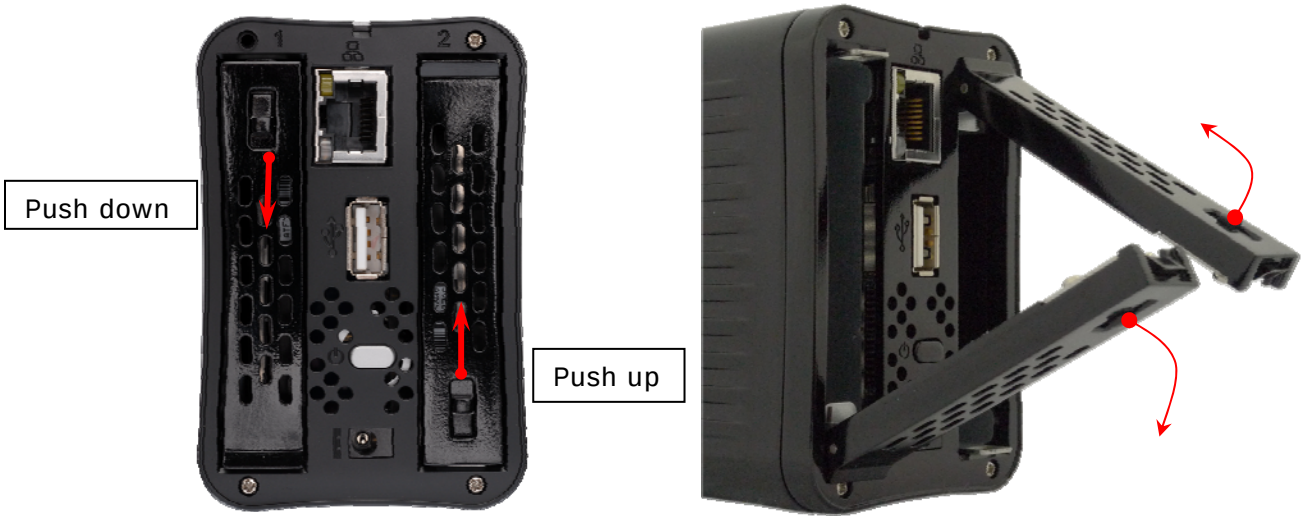
Before you begin, be sure to take the following precautions:

1. Read and understand the ***Safety Warnings*** outlined in the beginning of the manual.
2. If possible, wear an anti-static wrist strap during installation to prevent static discharge from damaging the sensitive electronic components on the N0204 miniNAS.
3. Be careful not to use magnetized screwdrivers around the N0204 miniNAS's electronic components.

Hard Disk Installation

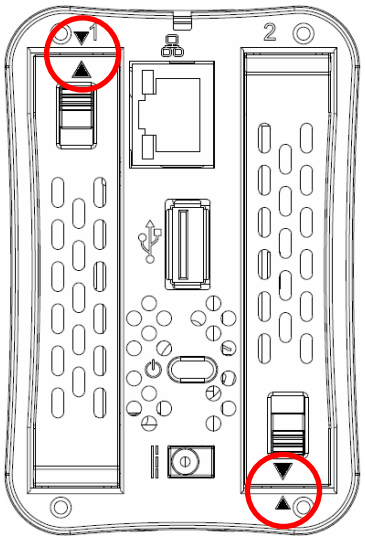
The N0204 miniNAS supports two standard 2.5" Serial ATA (SATA) hard disks. To install a hard disk into the N0204 miniNAS, follow the steps below:

1. Open 2.5" HDD tray from N0204 miniNAS, as the following chart.



2. Install HDD on the tray, as the following chart:

3. Install the tray with HDD into N0204, please note that the HDD-1 is in left side and HDD-2 is in right side. The triangular symbol of tray must be corresponding with the triangular symbol of back panel. Push the tray back.

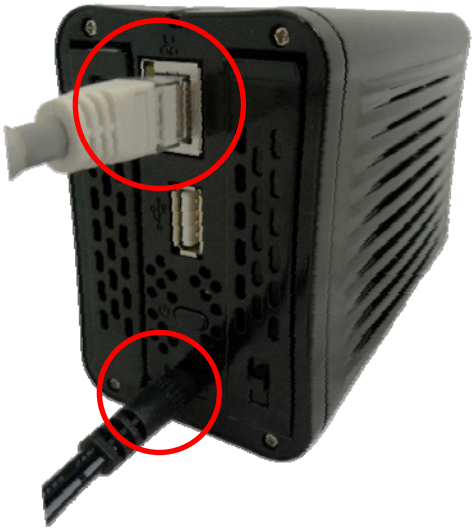


Cable Connections

To connect the N0204 miniNAS to your network, follow the steps below:

1. Connect an Ethernet cable from your network to the **LAN port** on the back panel of the N0204 miniNAS.

2. Connect the provided power adaptor into the **power socket** on the back panel. Plug the other end of the cord into a surge protector socket.



3. Press the **Power button** on the Rear end to boot up or shut down the N0204 miniNAS.

NOTE

1. USB copy LED will be flashed Blue light during the system are booting and will be dull after the booting complete.
2. To shut down the system, press the power button over 4 seconds, then USB copy LED will be flashed Red light, release power button.

Chapter 3: First Time Setup

Overview

Once the hardware is installed, physically connected to your network, and powered on, you can configure the N0204 miniNAS so that it is accessible to your network users. Follow the steps below for initial software setup.

Start Thecus N0204 Setup Wizard

The handy Thecus Setup Wizard makes configuring N0204 miniNAS a snap. To configure the N0204 miniNAS using the Setup Wizard, perform the following steps:

Setup1. Insert the installation CD

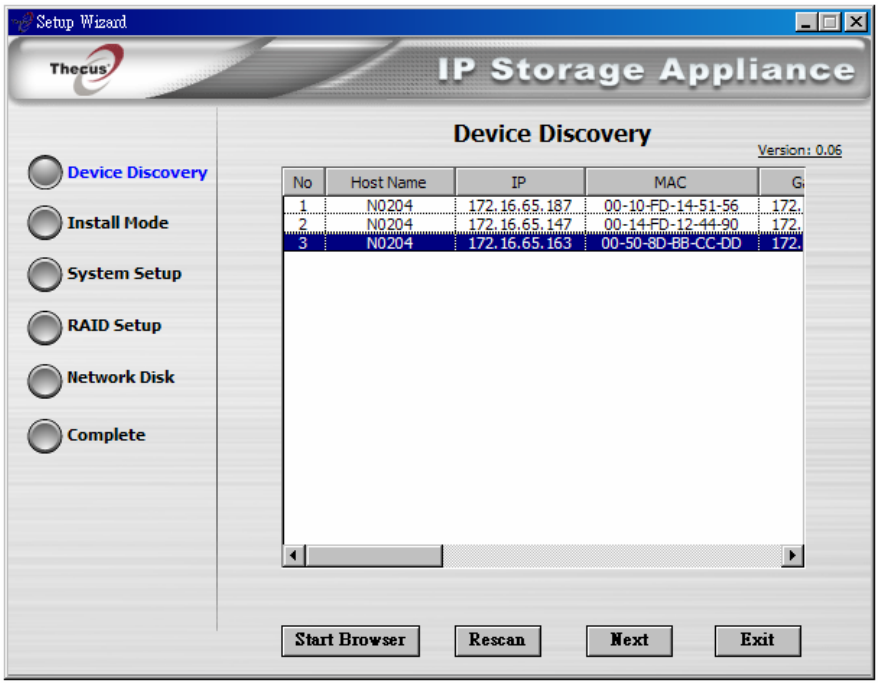
Insert the installation CD into your CD-ROM Drive (the host PC must be connected to the network). The auto run program should launch automatically. If not, please browse your CD-ROM drive and select setup wizard.

Setup2. Start the Windows Setup Wizard

It will start and automatically detect all N0204 minNAS storage devices on your network. If none are found, please check your connection and refer to Chapter 8: Troubleshooting for assistance.

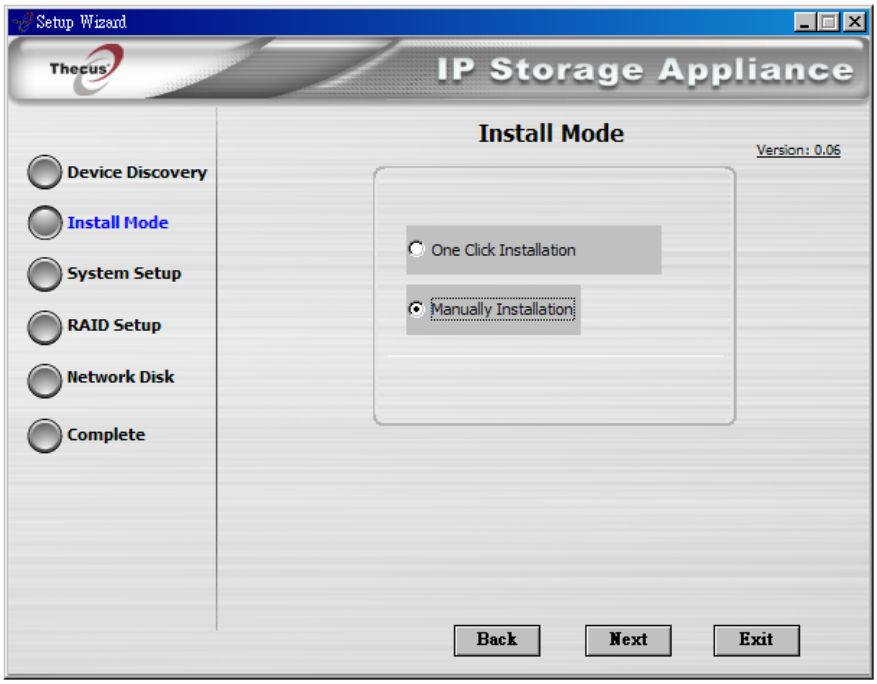
Setup3. Device Discovery

Select the N0204 miniNAS that you like to configure. Press Next to continue.



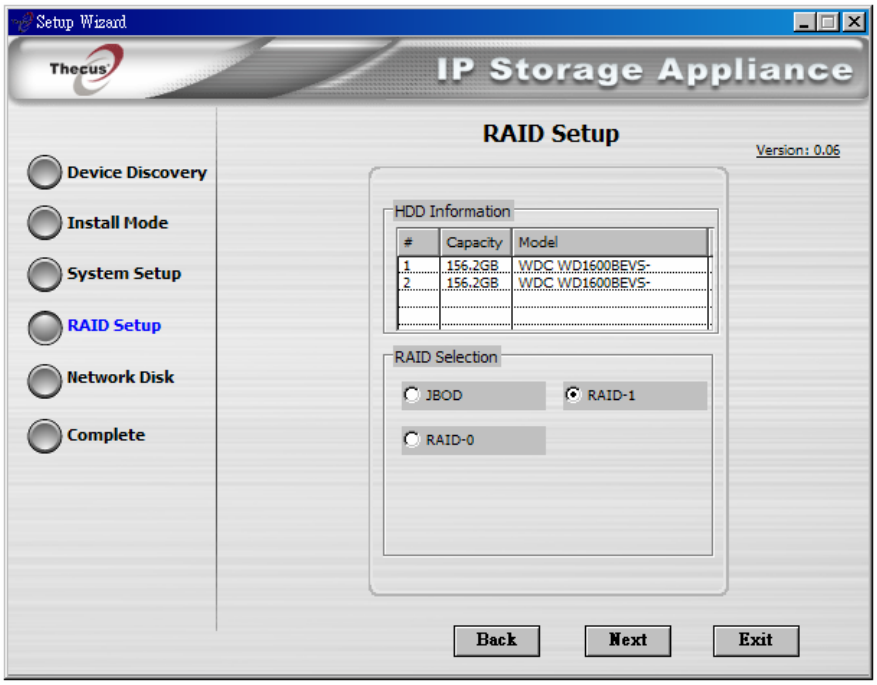
Setup4. Install Mode

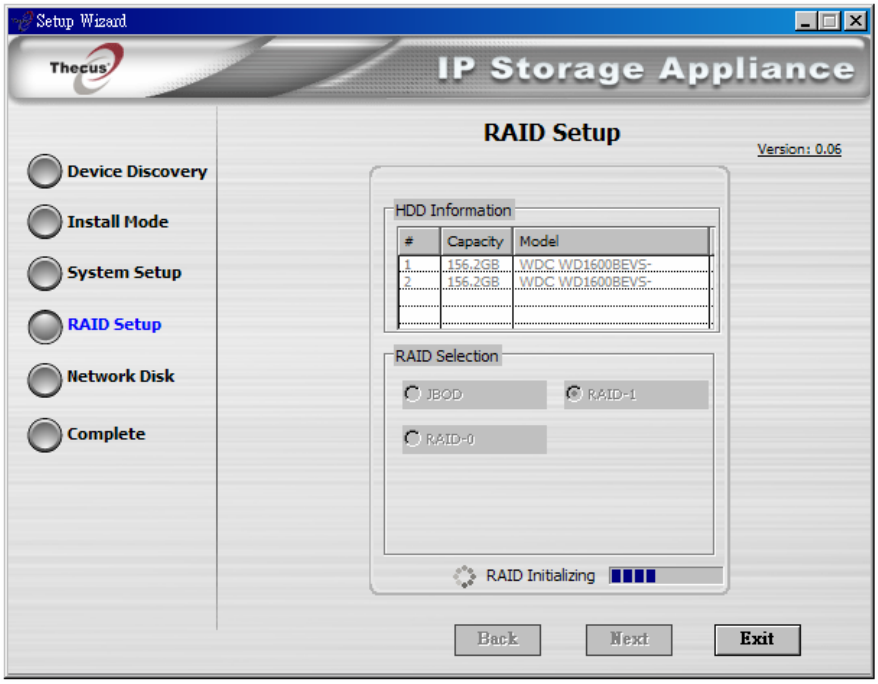
If you select “One Click Installation” then the Setup Wizard will automatically to install FW and available RAID into your N0204 with default setting. You also can select “Manually Installation” to setup your N0204 by step by step.



Setup5. RAUD Setup

The Setup Wizard will automatically detect all HDD on your N0204, select your desired RAID level, Press Next to continue.

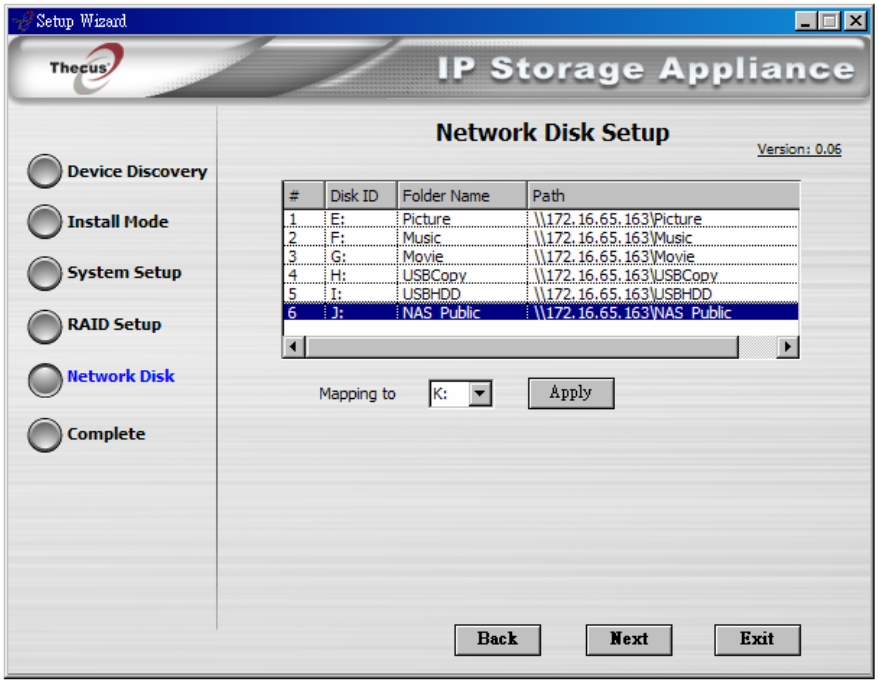




Note: You have to wait for HDD format and RAID setup; it may need to take around 60 ~ 100 seconds depend on RAID level selected

Setup6. Network Disk

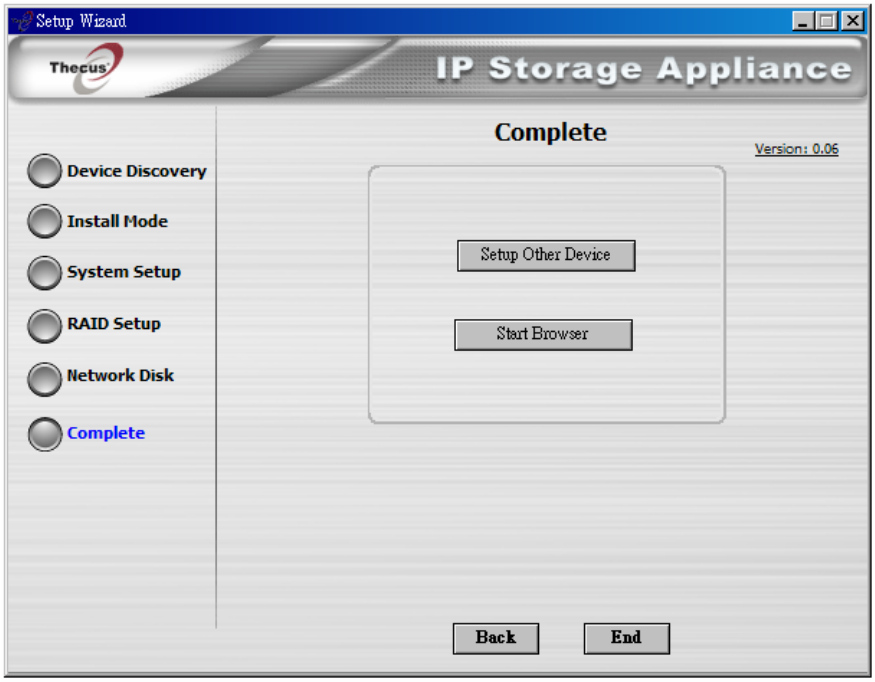
The Setup Wizard will automatically List system share folders and you could map these share folders to network driver to your PC or NB. Select your desired folder and map it to your local PC/NB as Network Device, press Apply. After all then press Next:

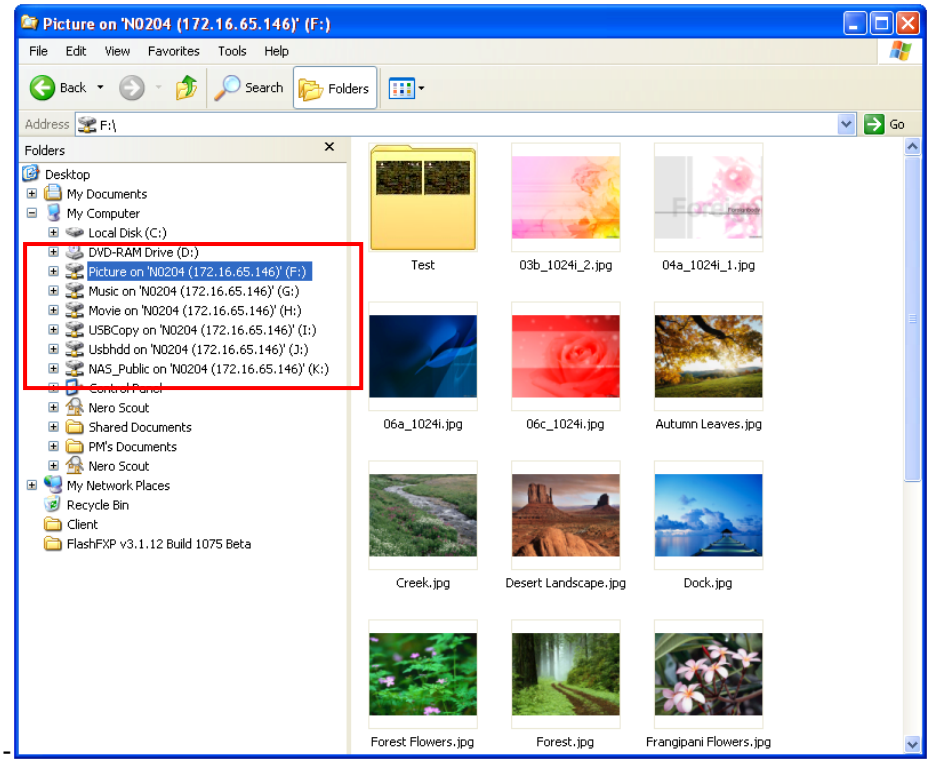


Note: About more Folder Manager Information, please refer to Chapter4 System Manager -> Folder Manager

Setup7. Complete

You have finished the installation of N0204 miniNAS. You can access the N0204 miniNAS Web Administrator Interface by pressing the Start Browser button. You can also configure another N0204 miniNAS at this point by clicking the Setup Other Device button. Or press Exit to exit the Setup Wizard and start to use N0204 on your PC/NB.





NOTE The Thecus Setup Wizard is designed for installation on systems running Windows XP/2000/Vista.

USB Copy

The USB Copy function enables you to copy files stored on USB devices such as USB disks and digital cameras to the N0204 miniNAS by press USB copy button. To use USB copy, follow the steps below:

1. Plug your USB device into USB2.0 port on the Front Panel.

2. Press USB copy Button and the N0204 miniNAS will start copying USB disks connected to the front end USB2.0 port.

3. The USB LED show
   - **Blinking Green:** Copy activity.
   - **Solid Green:** Copy Success.
   - **Solid Red:** Copy Fail.

Typical Setup Procedure

From the Web Administration Interface, you can begin to setup your N0204 miniNAS to use on your network. Setting up the N0204 miniNAS typically follows the five steps outlined below.

For more on how to use the Web Administration Interface, see **Chapter 4: System Management > Web Administration Interface**.

Step 1: Network Setup

From the Web Administration Interface, you can configure the network settings of the N0204 miniNAS for your network. You can access the **Network** menu from the menu bar.

For details on how to configure your network settings, refer to **Chapter 4: System Management > Network Management**.

Step 2: RAID Creation

Basically, the RAID volume creation will be complete while Setup Wizard been operated. For the RAID volume management, you can access RAID settings from the menu bar of the Web Administration Interface by navigating to ***Storage > RAID.***

For more information on RAID management, see **Chapter 4: System Management > RAID Configuration**.

Don't know which RAID level to use? Find out more about the different RAID levels from **Appendix C: RAID Basics**.

Step 3: Create Local Users or Setup Authentication

Once the RAID is ready, you can begin to create local users for the N0204 miniNAS, or choose to setup authentication protocols.

For more on managing users, go to **Chapter 4: System Management > User and Group Management**.

Step 4: Create Folders and Set Up ACLs

Once users are introduced into your network, you can begin to create various folders on the N0204 miniNAS and control user access to each using Folder Access Control Lists.

More information on managing folders, see **Chapter 4: System Management > Folder Management**.

To find out about configuring Folder Access Control Lists, see **Chapter 4: System Management > Folder Management > Folder Access Control List (ACL)**.

Step 5: Start Services

Finally, you can start to setup the different services of the N0204 miniNAS for the users on your network. You can find out more about each of these services by clicking below:

Windows Networking (SMB/CIFS)

Apple File Protocol (AFP)

Web Cam Server

Printer Server

iTunes® Server

Media Server

File Transfer Protocol (FTP)

Chapter 4: System Management

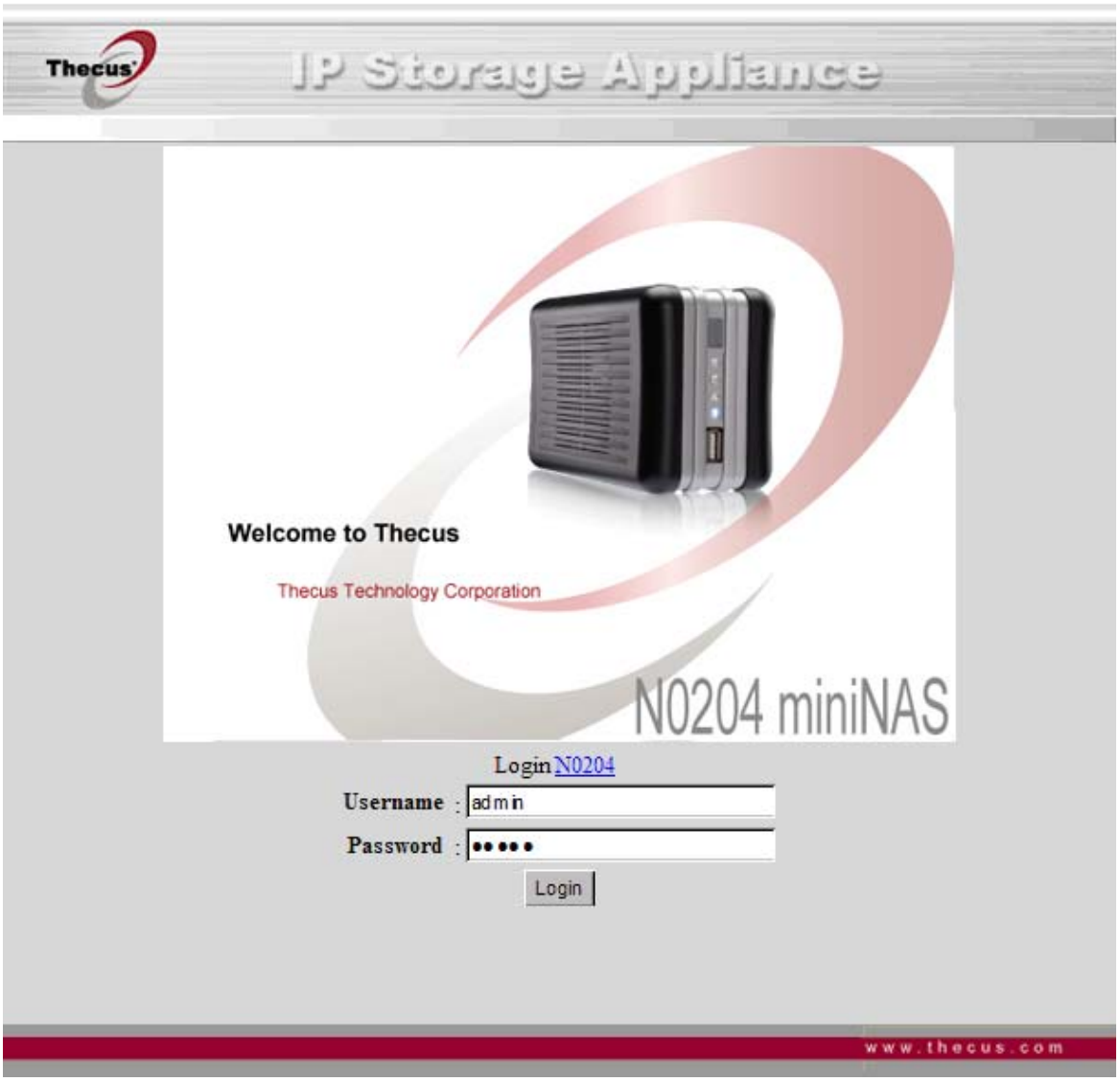
Overview

The N0204 miniNAS provides an easily accessible **Web Administration Interface**. With it, you can configure and monitor the N0204 miniNAS anywhere on the network.

Web Administration Interface

Make sure your network is connected to the Internet. To access the N0204 miniNAS **Web Administration Interface**:

1. Type the N0204 miniNAS's IP address into your browser. (Default IP address is set by DHCP, or system will assign IP address for it.)



2. Login to the system using the administrator user name and password. The factory defaults are:
   User Name: admin
   Password: admin

If you changed your password, please use the new password.

Once you are logged in as an administrator, you will see the **Web Administration Interface**. From here, you can configure and monitor virtually every aspect of the N0204 miniNAS from anywhere on the network.

Menu Bar

The **Menu Bar** is where you will find all of the information screens and system settings of the N0204 miniNAS. The various settings are placed in the following groups on the menu bar:

Menu Bar	
Item	**Description**
Status	Current system status of the N0204 miniNAS.
Storage	Information and settings for storage devices installed into the N0204 miniNAS.
Network	Information and settings for network connections, as well as various services of the N0204 miniNAS.
Accounts	Allows configuration of users and groups.
System	Various N0204 miniNAS system settings and information.
Language	Choose your preferred language here.

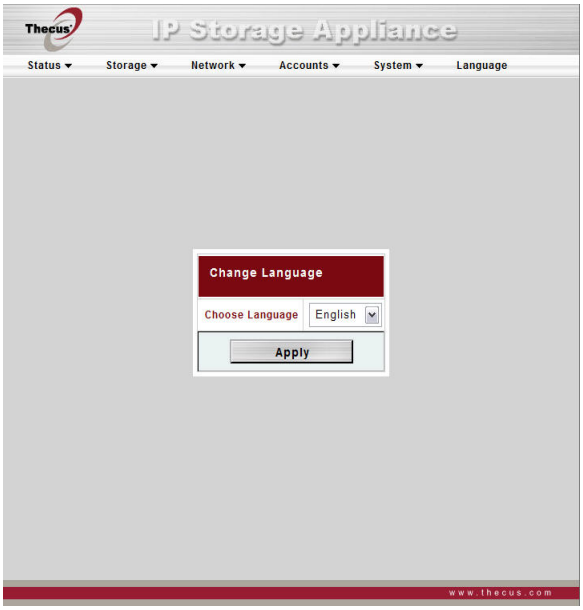
Moving your cursor over any of these items will display the dropdown menu selections for each group.

In the following sections, you will find detailed explanations of each function, and how to configure your N0204 miniNAS.

Language Selection

The N0204 miniNAS supports multiple languages, including:

- English
- French
- German
- Italian
- Traditional Chinese
- Simplified Chinese
- Japanese
- Korean
- Spanish
- Russia



On the menu bar, click ***Language*** and the **Change Language** screen appears. This screen allows you to select preferred language for the N0204 miniNAS. Press **Apply** to confirm your selection.

Status Menu

The **Status** Menu on the menu bar allows you to see various aspects of the N0204 miniNAS. From here, you can discover the status of the N0204 miniNAS, and even find out other details like firmware version and up time.

Product Information

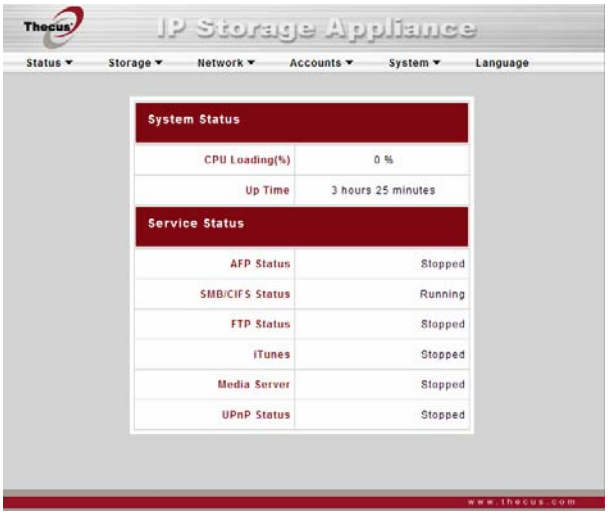
Once you login, you will first see the basic **Product Information** screen providing **Manufacturer**, **Product No.**, **Firmware Version**, and **Up Time** information.

Product Information	
Item	**Description**
Manufacturer	Displays the name of the system manufacturer.
Product No.	Shows the model number of the system.
Firmware version	Shows the current firmware version.
Up time	Displays the total run time of the system.

To access this screen again, navigate to ***Status*** > ***About***.

System Status

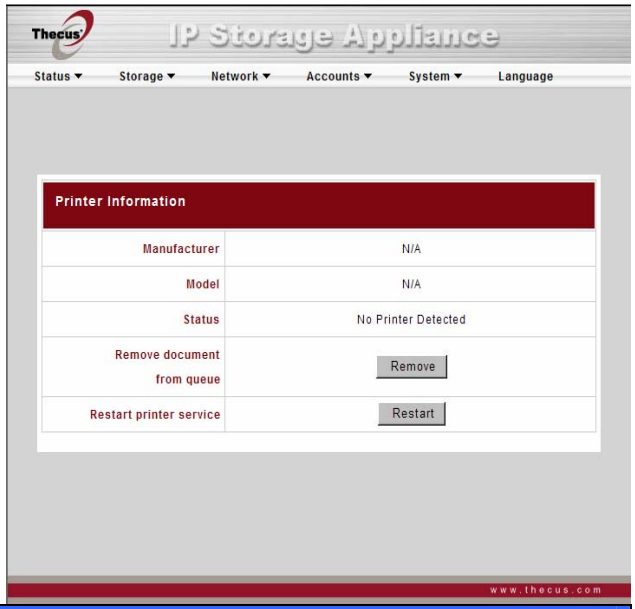
From the **Status** menu, choose the ***System*** item, and the **System Status** screen appears. These screens provide basic system status information.



System Status	
Item	**Description**
CPU Loading (%)	Displays current CPU workload of the N0204 miniNAS.
Up Time	Shows how long the system has been running.

Printer Status

From the **Status** menu, choose the ***Printer*** item, and the **Printer Information** screen appears. This screen provides the following information about the USB printer connected to the USB port.



Printer Status	
Item	**Description**
Manufacturer	Displays the name of the USB printer manufacturer.
Model	Displays the model of the USB printer.
Status	Displays the status of the USB printer.
Remove document from queue	Click to remove all documents from printer queue
Restart Printer Service	

If a corrupt print job is sent to a printer, printing may suddenly fail. If your print jobs seem to be locked up, pressing the Remove All Documents button to clear the print queue may resolve the issue.

For information on how to set up the Printer Server, refer to **Chapter 5: Additional Feature Setup > Printer Server**.

Web Camera

From the **Status** menu, choose the ***Web Camera*** item, and the **Web Camera** screen appears. This screen provides the following information about the USB Web Camera connected to the USB port.

Web Camera Configuration	
Item	**Description**
Image Size	Select your prefer image size during the Web Camera capture. There are 3 modes of size can be chose: 160x120, 320x240, 640x480 mm.

Interval	Setting the time interval to capture image.
Schedule	Schedule your Web Camera to
Preview	Click to preview current web camera capture image.
Apply	Click ***Apply*** to save changes.

Storage Management

The **Storage Menu** displays the status of storage devices installed in the N0204 miniNAS, and includes storage configuration options such as RAID and disk settings, folder configuration settings.

SATA Information

From the **Storage** menu, choose the ***SATA*** item and the **Disks Information** screen appears. From here, you can see various items about installed SATA hard disks. Blank lines indicate that a SATA hard disk is not currently installed in that particular disk slot. If there is a problem with a disk, a **Failed** message will be displayed in the **Status** column.

Disks Information	
Item	**Description**
Disk No.	Indicates disk location.
Capacity	Shows the SATA hard disk capacity.
Model	Displays the SATA hard disk model name.
Firmware	Shows the SATA hard disk firmware version.
Status	Indicates the status of the disk. Can read **OK**, **Warning**, or **Failed**.
Total Capacity	Shows the total SATA hard disk capacity.
Disk Power Management	The administrator can set the disk to power down after a period of inactivity.

NOTE When the Status shows Warning, it usually means there are bad sectors on the hard disk. It is shown only as a precaution and you should consider changing the drive.

USB Disk Information

From the **Storage** menu, choose the ***USB*** item and the **USB Information** screen appears. From here, you can see various items about USB disk connected to the N0204 miniNAS.

USB Information	
Item	**Description**
Disk No.	Number assigned to each USB disk.
Capacity (MB)	Shows the capacities of each USB disk in megabytes (MB).
Model	Displays the model names of each USB disk.
Firmware	Shows the firmware version of each USB disk.
Status	Shows the status of each USB disk. An ***Eject*** button appears beside each USB disk. Press this button before removing the USB disk.
Refresh	Press ***Refresh*** to rescan the status of the USB disks.

RAID Information

From the **Storage** menu, choose the ***RAID*** item and the **RAID Information** screen appears.

This screen lists the RAID volume currently residing on the N0204 miniNAS. From this screen, you can get information about the status of your RAID volume, as well as the status, used percentage, and stripe size.

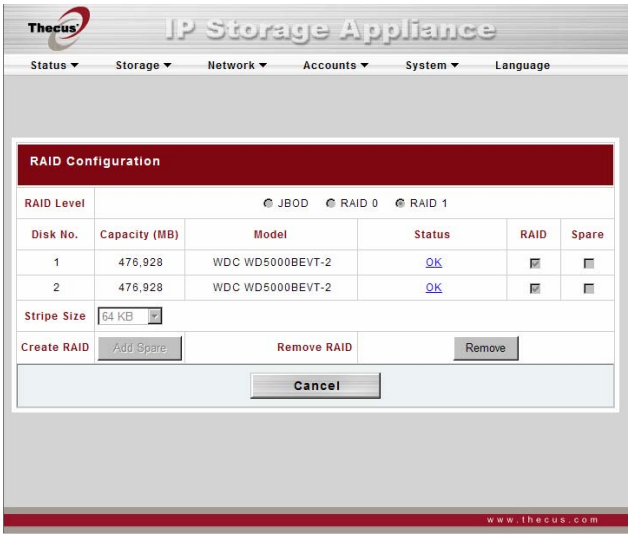
To configure your RAID settings, press the **Config** button to go to the **RAID Configuration** screen.

RAID Information	
Item	**Description**
RAID Level	Shows the current RAID configuration.
Total Capacity	Total capacity of the current RAID.
Status	Indicates status of the RAID. Can read either ***Healthy***, ***Degraded***, or ***Damaged***.
Used Percentage	Indicates total percentage used of the RAID volume.
Stripe Size	Indicates the current stripe size being used.
Remaining Time	Indicates the time remaining until the RAID volume is built.
Config	Press this to configure RAID volumes.

RAID Configuration

On the **RAID List** screen, press the **RAID Config** button to go to the **RAID Configuration** screen. In addition to RAID disk information and status, this screen lets you make RAID configuration settings.

For more information on RAID, see **Appendix C: RAID Basics**.



RAID Level

You can set the storage volume as **JBOD**, **RAID 0**, or **RAID 1**, RAID configuration is usually required only when you first set up the device. A brief description of each RAID setting follows:

RAID Levels	
Level	**Description**
JBOD	The storage volume is a single HDD with no RAID support. JBOD requires a minimum of 1 disk.
RAID 0	Provides data striping but no redundancy. Improves performance but not data safety. RAID 0 requires a minimum of 2 disks.
RAID 1	Offers disk mirroring. Provides twice the read rate of single disks, but same write rate. RAID 1 requires a minimum of 2 disks.

WARNING If the administrator improperly removes a hard disk that should not be removed when RAID status is degraded, all data will be lost.

RAID Settings

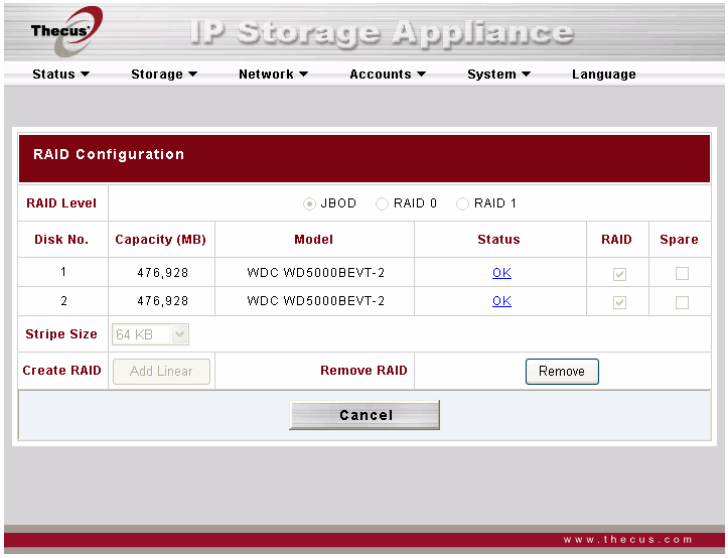
Using **RAID Settings**, you can select stripe size, choose which disks are RAID disks or the Spare Disk, as well as enter a name for each disk.

RAID Settings	
Item	**Description**
Disk No.	Number assigned to the installed hard disks.
Capacity (MB)	Capacity of the installed hard disks.
Model	Model number of the installed hard disks.
RAID	Check the boxes of the hard drives you wish to add to the storage volume.
Spare	If this is checked, current hard disk is designated to join a RAID volume.
Stripe Size	This sets the stripe size to maximize performance of sequential files in a storage volume. Keep the 64K setting unless you require a special file storage layout in the storage volume. A larger stripe size is better for large files.
Create RAID	Press this button to configure a file system and create the RAID storage volume.
Remove RAID	Click to remove the RAID volume. All user data will be removed.
Cancel	Press this button to exit without saving changes.

Creating a RAID

To create a RAID volume, follow the steps below:

1. On the **RAID Configuration** screen, set the RAID storage space as **JBOD**, **RAID 0**, or **RAID 1**, — see **Appendix C: RAID Basics** for a detailed description of each.
2. Tick the checkboxes of the hard disks you wish to use to create a RAID.
3. Specify a stripe size — 64K is the default setting.
4. Press **Create** to build the RAID storage volume.



NOTE Building a RAID storage space may take times, depending on the size of hard drives and RAID mode.

WARNING Creating RAID destroys all data in the current RAID. The data is unrecoverable.

Deleting a RAID

To delete a RAID volume, follow the steps below:

1. On the RAID List screen, select the RAID volume by clicking on its radio button, and click **Config** to open the **RAID Configuration** screen.
2. On the **RAID Configuration** screen, click **Remove**.
3. The system will prompt message to restart system, you can create a new RAID by execute Setup Wizard.

WARNIN Removing RAID destroys all data in the current RAID. The data is unrecoverable.

Folder Management

From the **Storage** menu, choose ***Folder***, and the **Folder** screen appears. This screen allows you to create and configure folders on the N0204 miniNAS volume.

Folder	
Item	**Description**
Folder name	Displays the name of the folder.
Description	Provides a description of the folder.
ACL	Press ***ACL*** (Access Control List) to configure which users have access to this folder.
Edit	Press ***Edit*** to enter the **Edit** screen and modify the folder's name and description.
Del	Press ***Del*** to delete the folder. A prompt appears asking to confirm the deletion.
Add	Press ***Add*** to enter the **Add Folder** screen.

Adding Folders

On the **Folder** screen, press the **Add** button and the **Add Folder** screen appears. This screen allows you to add a folder. After entering the information, press **Apply** to create new folder. Press **Back** to return to the **Folder** screen.

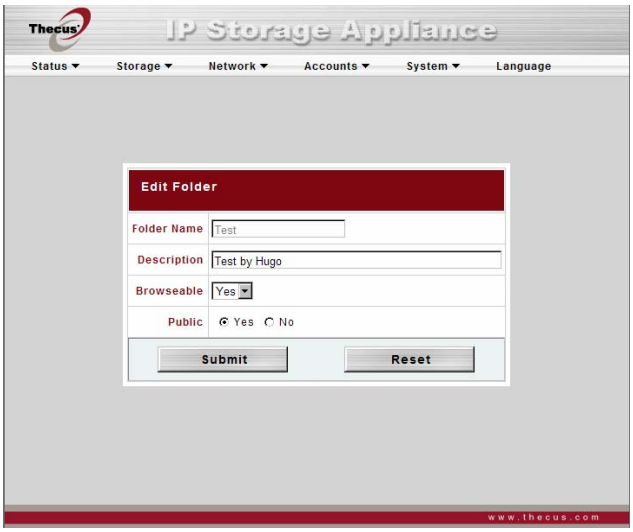
NOTE

Folder names are limited to 60 characters.

Add Folder	
Item	**Description**
Folder Name	Enter the name of the folder.
Description	Provide a description the folder.
Browseable	**Enable** or **Disable** users from browsing the folder contents. If **Yes** is selected, then the share folder will be browseable.
Public	Admit or deny public access to this folder. If **Yes** is selected, then users do not need to have access permission to write to this folder. When accessing a public folder via FTP, the behavior is similar to anonymous FTP. Anonymous users can upload/download a file to the folder, but they cannot delete a file from the folder.
Apply	Press ***Apply*** to create the folder.
Back	Press ***Back*** to return to the **Folder** screen.

Editing Folders

On the **Folder** screen, press the **Edit** button and the **Edit Folder** screen appears. This screen allows you to change folder information. After entering the information, press **Submit** to apply the changes. Press **Back** to return to the **Folder** screen.



Edit Folder	
Item	**Description**
Share Name	Enter the name of the (Share) folder.
Description	Provide a description the folder.
Browseable	Enable or disable users from browsing the folder contents.
Public	Admit or deny public access to this folder.
Submit	Press **Submit** to save your changes.
Back	Press **Back** to return to the **Folder** screen.

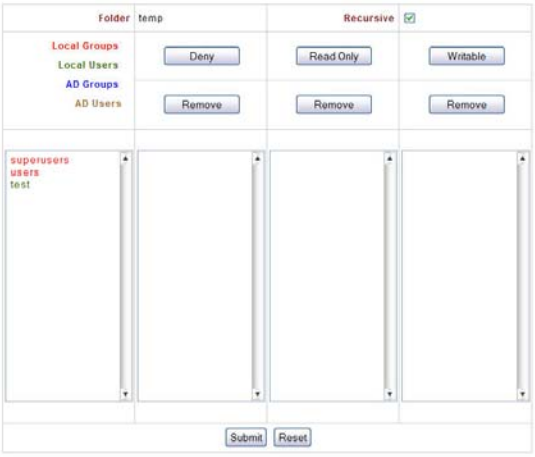
Deleting Folders

To delete a folder, press the **Del** button from the specified folder row. The system will confirm folder deletion. Press **OK** to delete the folder permanently or **Cancel** to go back to the folder list.

WARNING All the data stored in the folder will be deleted once the folder is deleted. The data will not be recoverable.

Folder Access Control List (ACL)

On the Folder screen, press the **ACL** button, and the **Access Control List** screen appears. This screen allows you to configure access to the specific folder for users and groups. Select a user or a group from the left hand column and then choose **Deny**, **Read Only**, or **Writable** to configure their access level. Press the **Submit** button to confirm your settings.



Access Control List	
Item	**Description**
Deny	Denies access to users or groups who are displayed in this column.
Read Only	Provides Read Only access to users or groups who are displayed in this column.
Writable	Provides Write access to users or groups who are displayed in this column.
Remove	Removes the selected user or group from the column in order to reset their access privileges.
Submit	Submits and confirms settings.
Reset	Cancel your settings and return to the **Folder** screen.

To configure folder access, follow the steps below:

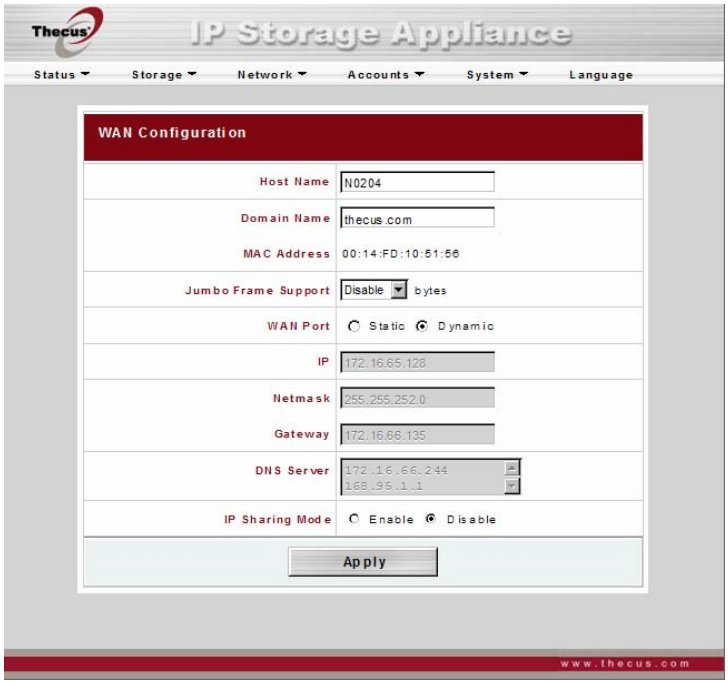
1. On the **ACL** screen, all network groups and users are listed in the left hand column. Select a group or user from this list.
2. With the group or user selected, press one of the buttons from the three access level columns at the top. The group or user then appears in that column and has that level of access to the folder.
3. Continue selecting groups and users and assigning them access levels using the column buttons.
4. To remove a group or user from an access level column, press the ***Remove*** button in that column.
5. When you are finished, press ***Submit*** to submit and confirm your ACL settings.

Network Management

Use the **Network** menu to make network configuration settings as well as service support settings.

LAN Configuration

From the **Network** menu, choose ***LAN***, and the **LAN Configuration** screen appears. This screen displays the network parameters of the LAN connection. You may change any of these items and press ***Apply*** to confirm your settings. See a description of each item in the following table:



LAN Configuration	
Item	**Description**
Host name	Host name that identifies the N0204 miniNAS on the network.
Domain name	Specifies the domain name of the N0204 miniNAS.
MAC Address	MAC address of the network interface.
Jumbo Frame Support	Enable or disable Jumbo Frame Support of the LAN interface on your N0204 miniNAS.
LAN Port	Enable or disable the N0204 miniNAS from obtaining in IP address via DHCP server. If you require a static IP, disable this feature and input your network configuration.
IP	IP address of the LAN interface.
Netmask	Network mask, which is generally: 255.255.255.0
Gateway	Default Gateway IP address.
DNS Server	Domain Name Service (DNS) server IP address.
IP Sharing Mode	When enabled, PCs connected to the LAN port will be able to access the LAN. Default is Disabled.

NOTE

- Only use Jumbo Frame settings when operating in a Gigabit environment where all other clients have Jumbo Frame Setting enabled.
- Enabling DHCP automatically turns on UPnP—sees the Service Support Screen.
- A correct DNS setting is vital to networks services, such as SMTP and NTP.

WARNING

Most Fast Ethernet (10/100Mbps) Switches/Routers do not support Jumbo Frame and you will not be able to connect to your N0204 after Jumbo Frame is turned on. If this happens, please reset your N0204 network settings and it will turn off Jumbo Frame Support. How to do? Please refer to: Chapter 8: Troubleshooting -> Resetting NAS IP Address and Admin Password

DDNS Configuration

From the **Network** menu, choose the **DDNS** item, and the **DDNS Support** screen appears. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:

DDNS Support	
Item	**Description**
DDNS	Enable or disable DDNS support.
Register	Enter your desired DDNS server here.
User Name	Enter your user name.
Password	Enter your password or DDNS key.
Domain Name	Enter your host name (i.e. www.N0204 miniNAS.dyndns.org)
Apply	Click to save your changes.

Typical DDNS Configuration Procedure

To setup DDNS on your N0204 miniNAS, follow the steps below:

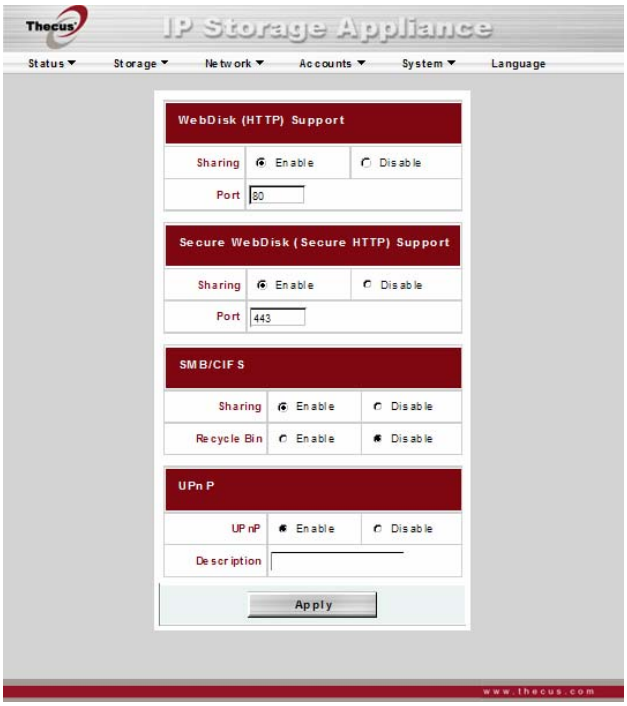
1. Go to http://www.dyndns.org from your home PC.
2. Click on the **Sign up Now** link.
3. Check the check boxes, select a user name (i.e.: N0204 miniNAS), enter your E-mail address (i.e.: xxx@example.com), check **Enable Wildcard**, and create a password (i.e.: xxxx).
4. Wait for an E-mail from http://www.dyndns.org.
5. Open the email and click on the link to activate your account.
6. Once your account is activated, enter the DDNS server, user name, password, and host name into the **DDNS Support** screen.
7. Click **Apply** to save your changes.

Services Configuration

From the **Network** menu, choose the **Service** item, and the **Web Service** screen appears. This screen displays the service support parameters of the system. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:

NOTE

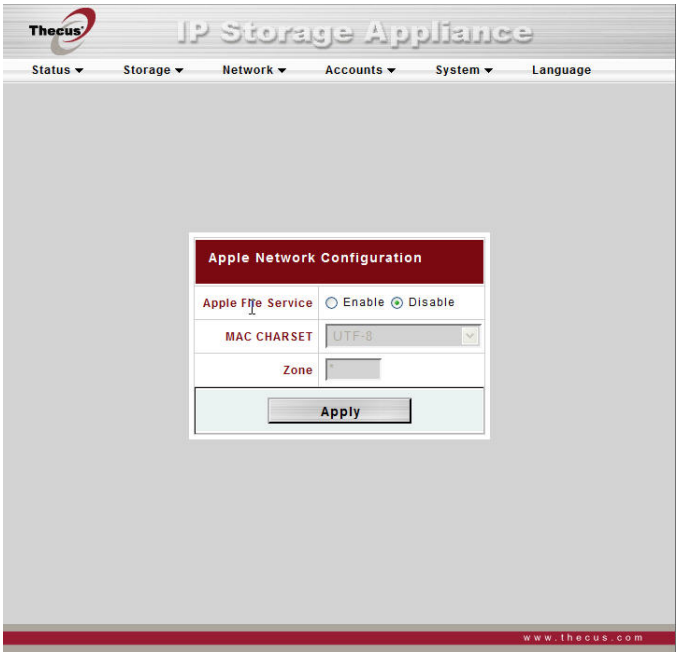
Disable HTTP support and Enable Secure HTTP support to guarantee secure access.



Service Configuration	
Item	**Description**
WebDisk (HTTP) Support	Enable or disable WebDisk support. Enter the port number if this option is enabled.
Secure WebDisk (Secure HTTP) Support	Enable or disable secure WebDisk support. Enter the port if this option is enabled.
SMB/CIFS	Enable or disable SMB/CIFS. Enable or disable Recycle Bin.
UPnP	Enable or disable Universal Plug and Play protocol. UPnP helps to find the IP address of the N0204 miniNAS.

Apple Network

From the **Network** menu, choose the **Apple Network** item, and the **Apple Network Configuration** screen appears. This screen displays the configuration items for the Apple Filing Protocol. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:



Apple Network Configuration	
Item	**Description**
AFP Server	Enable or disable Apple File Service to use the N0204 miniNAS with MAC OS-based systems.
MAC CHARSET	If your operating system does not support Unicode (e.g. MAC OS9/8), select the same language as your OS here in order to properly view the files and directories on the server.
Zone	Specifies Zone for Applet Talk service. If your AppleTalk network uses extended networks and is assigned with multiple zones, assign a zone name to the N0204 miniNAS. If you do not want to assign a network zone, enter an asterisk (*) to use the default setting.

User and Group Management

The N0204 miniNAS has built-in user database that allows administrators to manage user access using different group policies. From the **Accounts** menu, you can create, modify, and delete users, and assign them to groups that you designate.

Local User Configuration

From the **Accounts** menu, choose the **Users** item, and the **Local User Configuration** screen appears. This screen allows you to **Add**, **Modify**, and **Delete** local users.

Local User Configuration	
Item	**Description**
Add	Press the **Add** button to add a user to the list of local users.
Modify	Press the **Modify** button to modify a local user.
Delete	Press the **Delete** button to delete a selected user from the system.

Adding Users

1. Click on the **Add** button on **Local User Configuration** screen, and **Local User Setting** screen appears.
2. On the **Local User Setting** screen, enter a name in the **User Name** box.
3. Enter a password in the **Password** box and re-enter the password in the **Confirm** box.
4. Select which group the user will belong to. **Group Members** is a list of groups this user belongs to. **Group List** is a list of groups this user does not belong to. Use the **<<** or **>>** buttons to have this user join or leave a group.

5. Press the **Apply** button and the user is created.

NOTE All users are automatically assigned to the 'users' group.

Modifying Users

1. Select an existing user from the **Local User Configuration** screen.
2. Click on the **Modify** button, and **Local User Setting** screen appears.

3. From here, you can enter a new password and re-enter to confirm, or use the **<<** or **>>** buttons to have this user join or leave a group. Click the **Apply** button to save your changes.

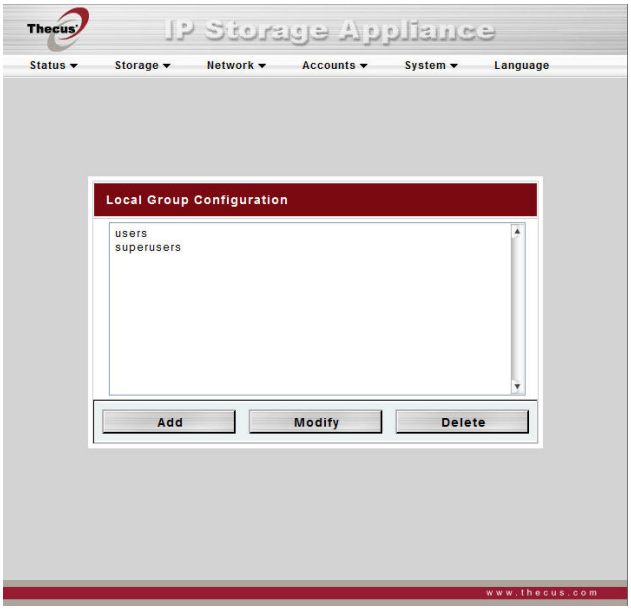
Deleting Users

1. Select an existing user from the **Local User Configuration** screen.

2. Click on **Delete** button and the user is deleted from the system.

Local Groups Configuration

From the **Accounts** menu, choose the ***Groups*** item, and the **Local Groups Configuration** screen appears. This screen allows you to **Add**, **Modify**, and **Delete** local groups.



Local Groups Configuration	
Item	**Description**
Add	Press the ***Add*** button to add a user to the list of local groups.
Modify	Press the ***Modify*** button to delete a selected group from the system.
Delete	Press the ***Delete*** button to delete a selected group from the system.

Adding Groups

1. On the **Local Group Configuration** screen, click on the **Add** button.

2. The **Local Group Setting** screen appears.

3. Enter a **Group Name**, and select users to be in this group from the **Users List** by adding them to the **Members List** using the **<<** button.

4. Click the **Apply** button to save your changes.

Modifying Groups

1. On the **Local Group Configuration** screen, select a group name from the list.
2. Press the **Modify** button to modify the members in a group.
3. To add a user into a group, select the user from the **Users List**, and press the **<<** button to move the user into the **Members List**.
4. To remove a user from a group, select the user from **Members List**, and press the **>>** button.
5. Click the ***Apply*** button to save your changes.

Deleting Groups

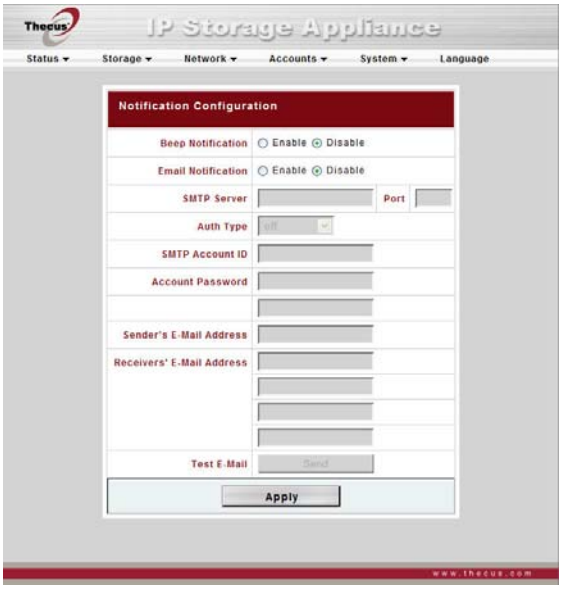
1. On the **Local Group Configuration** screen, select a group name from the list.
2. Press **Delete** to delete the group from the system.

System Settings

The **System** menu gives you a wealth of settings that you can use to configure your N0204 miniNAS's system administration functions. You can set up system notifications, view system logs, and even upgrade firmware from this menu.

System Notifications

From the **System** menu, choose the **Notification** item, and the **Notification Configuration** screen appears. This screen lets you have the N0204 miniNAS notify you in case of any system malfunction. Press **Apply** to confirm all settings. See following table for a detailed description of each item.



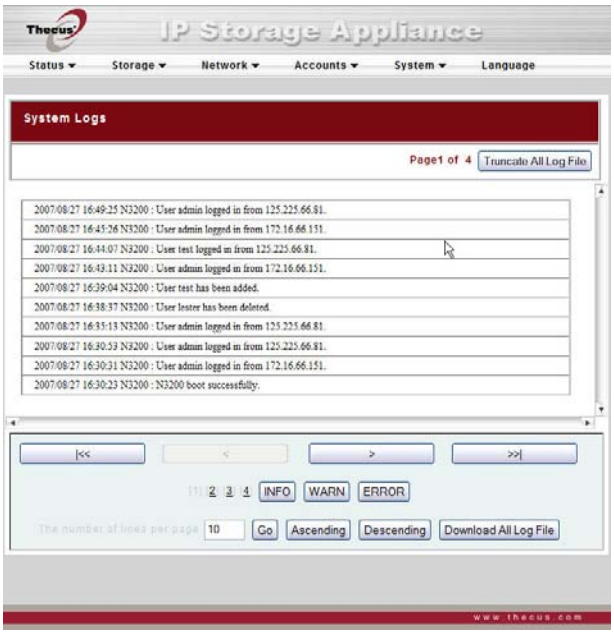
NOTE

Consult with your mail server administrator for email server information.

Notification Configuration	
Item	**Description**
Email Notification	Enable or disable email notifications of system problems.
SMTP Server	Specifies the hostname/IP address of the SMTP server.
Port	Specifies the port to send outgoing notification emails.
Auth Type	Select the SMTP Server account authentication type.
SMTP Account ID	Set the SMTP Server Email account ID.
Account Password	Enter a new password.
Confirm Account Password	Confirm a new password.
Receiver's E-mail Address	Add one or more recipient's E-mail addresses to receive E-mail notifications.
Test E-Mail	Click to send out a test E-mail to make sure the settings are correct.

System Logs

From the **System** menu, choose the **Logs** item and the **System Logs** screen appears. This screen shows a history of system usage and important events such as disk status, network information, and system booting. See the following table for a detailed description of each item:

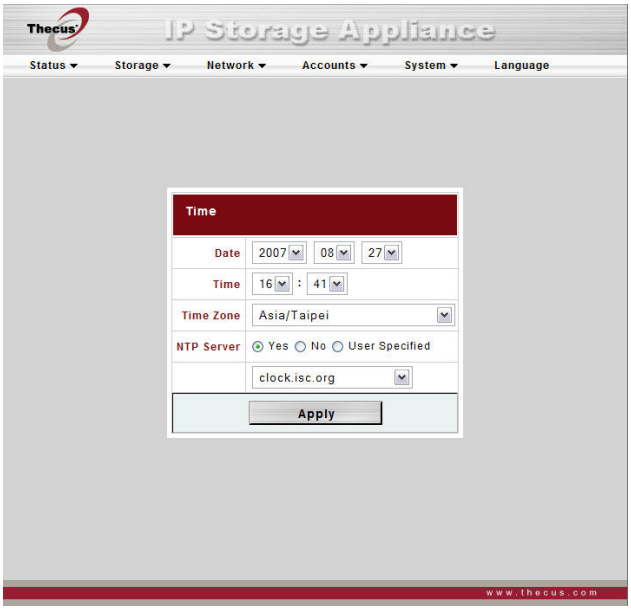


System Logs	
Item	**Description**
Truncate All Log File	Clear all log files.
|<< < > >>|	Use the forward (**> >>|**) and backward (**|<< <**) buttons to browse the log pages.
INFO	Provides all log information including warning messages and error messages.
WARN	Shows all warning messages and error messages.
ERROR	Shows only error messages.
GO	Specify the number of lines per page and press Go.
Ascending	Shows logs by date in ascending order.
Descending	Shows logs by date in descending order.
Download All Log File	Export all logs to an external file.

Time and Date Settings

From the **System** menu, choose the **Time** item and the **Time** screen appears. Set the desired **Date**, **Time**, and **Time Zone**. You can also elect to synchronize the system time on the N0204 miniNAS with an **NTP (Network Time Protocol) Server**. You can change any of these items and press **Apply** to confirm your settings.

See the following table for a detailed description of each item:

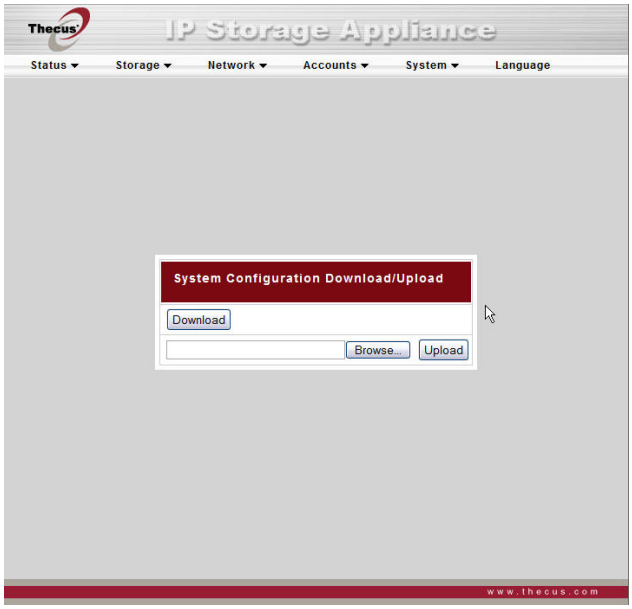


Time	
Item	**Description**
Date	Sets the system date.
Time	Sets the system time.
Time Zone	Sets the system time zone.
NTP Server	Select **YES** to allow the N0204 miniNAS to synchronize with the **NTP server** shown below. Select **Manually** to allow the N0204 miniNAS to synchronize with an NTP server of your choice. Select **NO** to not have the N0204 miniNAS to synchronize with an NTP server.

WARNING If an NTP server is selected, please make sure your N0204 network has been setup to access the NTP server.

System Configuration Backup and Restore

From the **System** menu, choose the **Config Mgmt** item and the **System Configuration Download / Upload** screen appears. From here, you can download or upload stored system configurations. See the following table for a detailed description of each item.



NOTE

Backing up your system configuration is a great way to ensure that you can revert to a working configuration when you are experimenting with new system settings.

System Configuration Download / Upload	
Item	**Description**
Download	Save and export the current system configuration.
Browse	Click to browse for the configuration file you wish to import.
Upload	Import a saved configuration file to overwrite current system configuration.

Module Management

From the **System** menu, choose the **Module Mgmt** item and the **Module Management** screen appears. From here, you can install separate software modules to extend the functionality of your N0204 miniNAS.

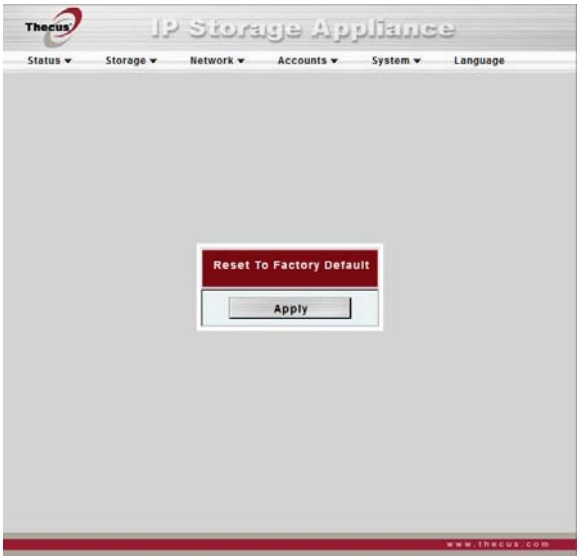
NOTE

Modules can potentially harm your system. Only install modules from your vendor, or publishers you can trust.

Module Management	
Item	**Description**
Name	Displays the name of the module.
Version	Displays the module version.
Description	The description of the module.
Enable	Displays whether the module has been enabled or not.
Status	Displays the status of the module.
Uninstall	Click to uninstall the module.
Enable (button)	Click to enable a module.
Disable	Click to disable a module.
Browse	Click to browse the folder of your PC to locate the module files.
Install	Click to install the listed module into your N0204 miniNAS

Reset to Factory Default Settings

From the **System** menu, choose the ***Factory Default*** item and the **Reset to Factory Default** screen appears. Press ***Apply*** to reset the N0204 miniNAS to factory default settings. Press ***Cancel*** to go back to the main menu.

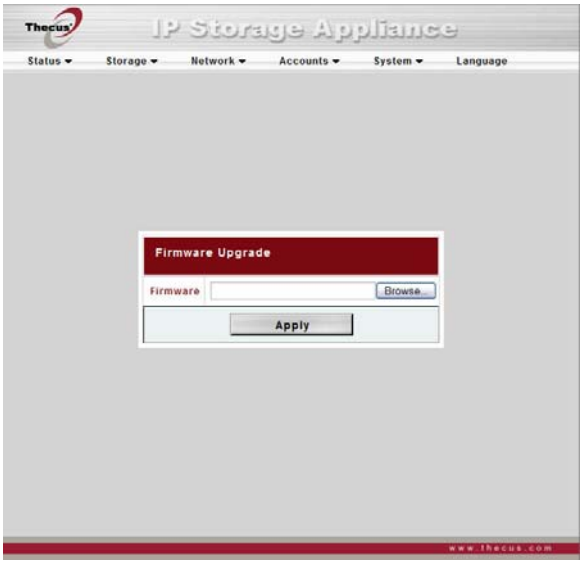


WARNING

Resetting to factory defaults will not erase the data stored in the hard disks, but WILL revert all the settings to the factory default values.

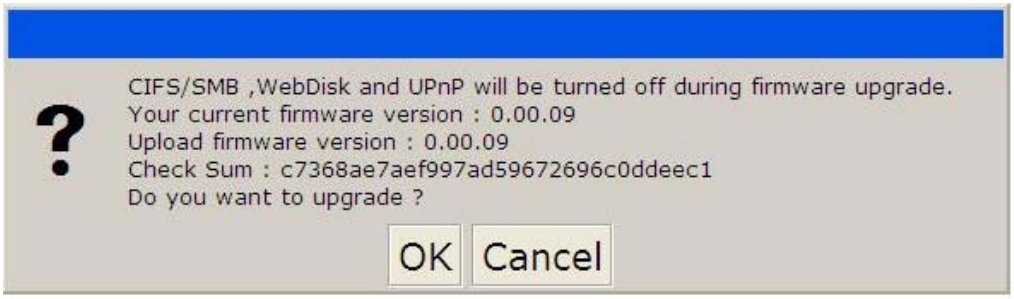
Upgrading System Firmware

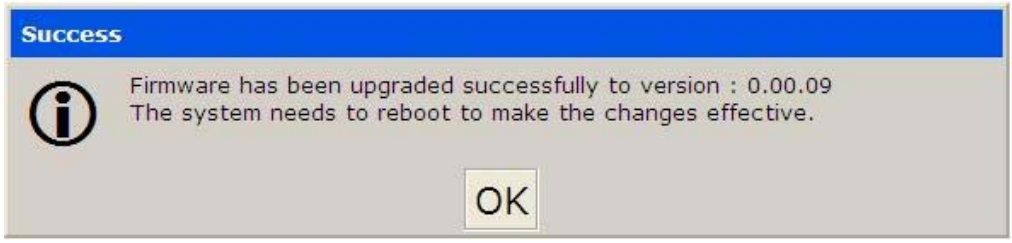
From the **System** menu, choose the **Firmware Upgrade** item and the **Firmware Upgrade** screen appears.



Follow the steps below to upgrade your firmware:

1. Use the **Browse** button to find the firmware file, and then press **Apply.**
2. Press OK to upgrade the Firmware.
3. During the firmware upgrade was in process, the system will appear the rate of progress.
4. Once the upgrade is complete, the system will pop a message; press OK to reboot the system.


CIFS/SMB ,WebDisk and UPnP will be turned off during firmware upgrade.
Your current firmware version : 0.00.09
Upload firmware version : 0.00.09
Check Sum : c7368ae7aef997ad59672696c0ddeec1
Do you want to upgrade ?
OK
Cancel


Success
Firmware has been upgraded successfully to version : 0.00.09
The system needs to reboot to make the changes effective.
OK

NOTE

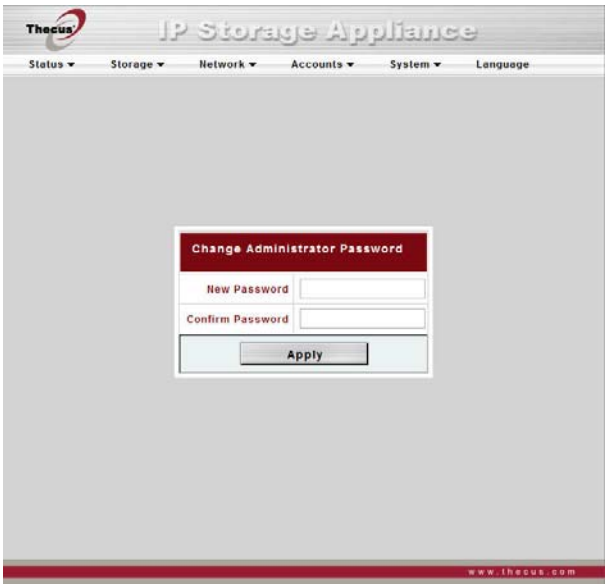
- Check Thecus website for the latest firmware release and release notes.
- Downgrading firmware is not permitted.

WARNING

Do NOT turns off the system during the firmware upgrade in process. This will brings a catastrophic result that may render the system inoperable.

Change Administrator Password

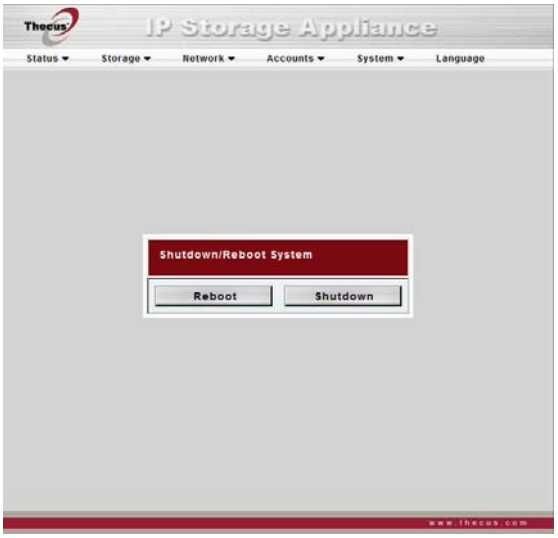
From the **System** menu, choose the ***Administrator Password*** item and the **Change Administrator Password** screen appears. Enter a new password in the **New Password** box and confirm your new password in the **Confirm Password** box. Press ***Apply*** to confirm password changes. See the following table for a detailed description of each item.



Change Administrator Password	
Item	**Description**
New Password	Type in a new administrator password.
Confirm Password	Type the new password again to confirm.
Apply	Press this to save your changes.

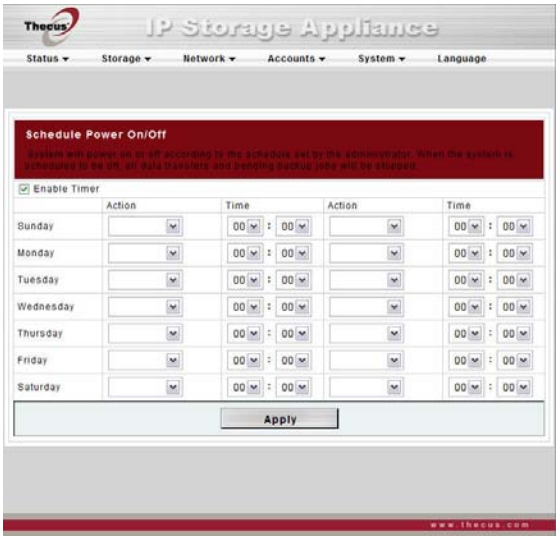
Reboot and Shutdown System

From the **System** menu, choose **Reboot & Shutdown** item, and the **Shutdown / Reboot System** screen appears. Press ***Reboot*** to restart the system or ***Shutdown*** to turn the system off.



Scheduled Power On / Off

You may also designate a schedule for the N0204 miniNAS to turn on and off. To do this, first enable the feature by checking the **Enable Timer** checkbox. Then, simply choose an on and off time for each day of the week that you would like to designate a schedule by using the various dropdowns. Finally, click ***Apply*** to save your changes.



Example - Monday: On: 8:00; Off: 16:00
System will turn on at 8:00 AM on Monday, and off at 16:00 on Monday. System will turn on for the rest of the week.

If you choose an on time, but do not assign an off time, the system will turn on and remain on until a scheduled off time is reached, or if the unit is shutdown manually.

Example - Monday: On: 8:00
System will turn on at 8:00 AM on Monday, and will not shut down unless powered down manually.

You may also choose two on times or two off times on a particular day, and the system will act accordingly.

Example - Monday: Off: 8:00; Off: 16:00
System will turn off at 8:00 AM on Monday. System will turn off at 16:00 PM on Monday, if it was on. If the system was already off at 16:00 PM on Monday, system will stay off.

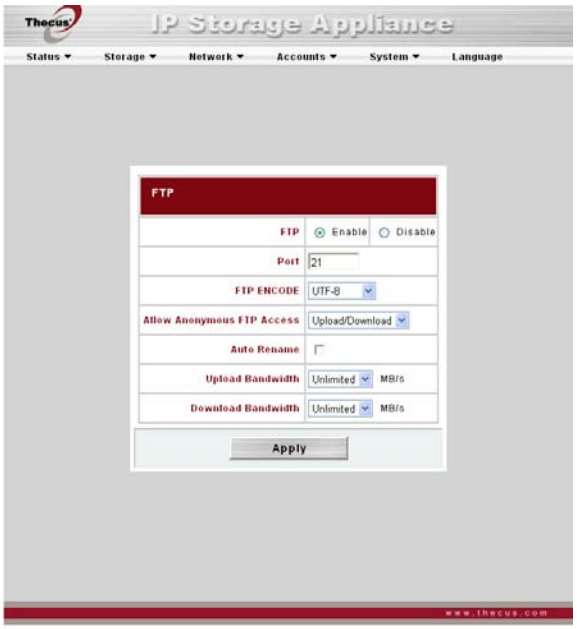
Logout

To logout of the Web Administration Interface, navigate to ***System*** > ***Logout***.

Chapter 5: Additional Feature Setup

FTP Server

N0204 miniNAS can act as a FTP server, enabling users to download and upload files with their favorite FTP programs. From the **Network** menu, choose the **FTP** item, and the **FTP** screen appears. You can change any of these items and press **Apply** to confirm your settings. A description of each item follows:



FTP	
Item	**Description**
FTP	Enable FTP Service on the N0204 miniNAS.
Port	Specifies the port number of an incoming connection on a non-standard port.
FTP ENCODE	If your FTP client or operating system does not support Unicode (e.g. Windows® 95/98/ME or MAC OS9/8), select the same encoding as your OS here in order to properly view the files and directories on the server. Available options are BIG5, HZ, GB2312, GB18030, ISO, EUC-JP, SHIFT-JIS and UTF-8.
Allow Anonymous FTP Access	**Upload / Download:** Allow anonymous FTP users to upload or download files to/from public folders. **Download:** Allow anonymous FTP users to download files from public folders. **No access:** Block anonymous FTP user access.
Auto Rename	If checked, the system will automatically rename files that are uploaded with a duplicate file name. The renaming scheme is [filename].#, where # represents an integer.
Upload Bandwidth	You may set the maximum bandwidth allocated to file uploads. Selections include **Unlimited, 1, 2, 4, 8,** and **16 MB/s.**
Download Bandwidth	You may set the maximum bandwidth allocated to file downloads. Selections include **Unlimited, 1, 2, 4, 8, 16 MB/s.**

To access the share folder on the N0204 miniNAS, use the appropriate user login and password set up on the **Users** page (***Accounts*** > ***Users***). Access control to each share folder is set up on the **ACL** page (***Storage*** > ***Folder*** > ***ACL***).

When trying to access N0204 miniNAS anonymously, just enter "**anonymous**" as the user name.

iTunes® Server

With the built-in iTunes server capability, the N0204 miniNAS enables digital music to be shared and played anywhere on the network!

From the **Network** menu, choose the **iTunes** item, and the **iTunes Configuration** screen appears. You may enable or disable the iTunes Service from here. Once enabled, enter correct information for each field and press **Apply** to save your changes. See the following table for detailed descriptions of each field:

iTunes Configuration	
Item	**Description**
iTunes	Enable or disable the iTunes Service.
Server Name	Name used to identify the N0204 miniNAS to iTunes clients.
Password	Enter password to control access to your iTunes music.
Rescan Interval	Rescan interval in seconds.
MP3 Tag Encode	Specify tag encoding for MP3 files stored in N0204 miniNAS. All ID3 tags will be sent out in UTF-8 format.

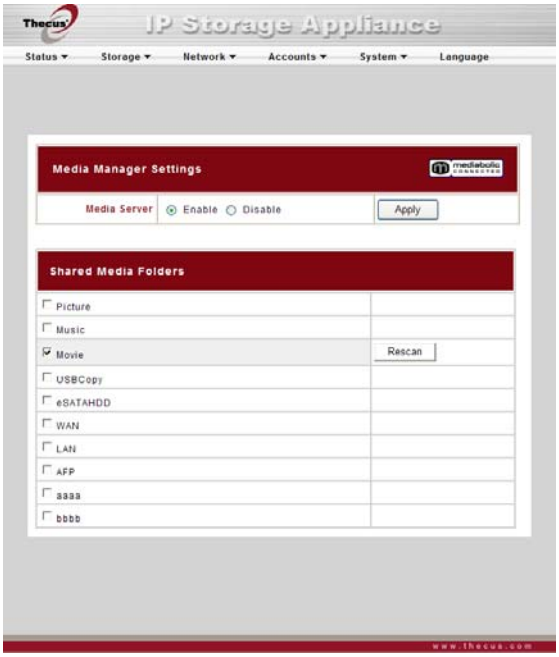
Once the iTunes service is enabled, the N0204 miniNAS will make all music located in the **Music** folder available for iTunes-equipped computers on the network.

Media Server

With the built-in Media Server capability, the N0204 miniNAS provides media streaming service to stand-alone networked home media adapters that support the UPnP AV protocol or are Digital Living Network Alliance (**DLNA**) standard compliant.

With the N0204 miniNAS's built-in media server capability, you can share digital media such as music, pictures, and movies with any compatible device throughout your entire home.

To configure the media server, under the **Network** menu, click **Media Server** and the **Media Manager Settings** window will appear. A description of each field follows:



Media Manager Settings	
Item	**Description**
Media Server	**Enable** or **Disable** the Media Server service.
Shared Media Folders	Select the folder(s) that contains media files to be shared.
Rescan	Click the ***Rescan*** button to have the N0204 miniNAS for new contents in the selected media folder.

Adding Media Share Folders

Once the Media Server software is installed, you can start adding folders that contain the media that you would like to share. To create a media share folder, follow the steps below:

1. Click on ***Network*** > ***Media Server*** in the menu bar.

2. From the **Shared Media Folders** window, select the folder that contains your media files, and click its checkbox.

3. The contents in the folder will be scanned for the Media Server. The time required for scanning depends on the size of the folder.

Connecting DMAs to the Media Server

Next, it's time to connect your Digital Media Adapter (**DMA**) to the media server:

1. Connect your DMA to your Media Server

    a. Configure your DMA to use a Dynamic IP address. The IP address will be assigned by the router.
    b. Some DMAs are wireless enabled. You can connect the DMA to a wireless router. For instructions on how to connect your DMA to a wireless router, please refer to your DMA's user manual.

2. Connect your DMA's video output to video input of your TV set.

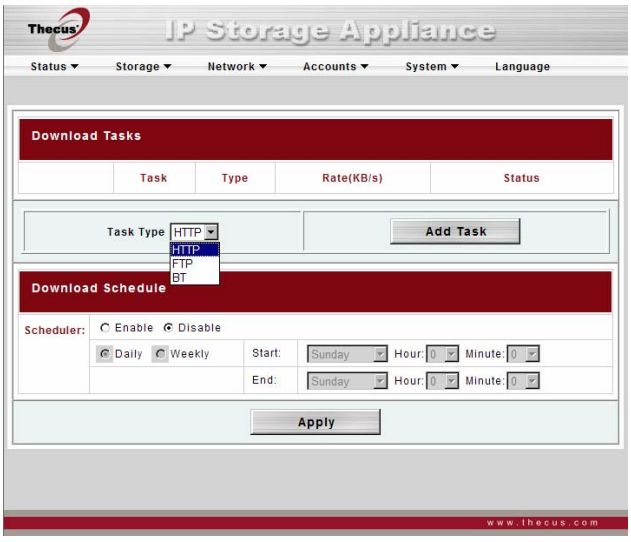
3. Turn on the TV and change the video signal input to DMA.

4. Setup the DMA (These steps will be different if you use a different DMA)

    a. From the Server List screen, select "**N0204 miniNAS:Mediabolic Server**" as the server.
    b. Go to **My Media**
    c. Click on the **Up/Down Arrow** buttons to select **Music Jukebox**, **Photo Albums**, or **Video Clips**
    d. Start enjoying the contents stored in your N0204 miniNAS.

Download Manager

With the built-in Download Manager, you can have the N0204 miniNAS download HTTP, FTP, and BT files without having full PC powered on. What's more, you can even schedule your downloads for off-peak hours, ensuring efficient use of bandwidth. To access the Download Manager, go to **Network**, choose the **Download Manager** option, and the **Download Tasks** and **Download Schedule** windows appear.

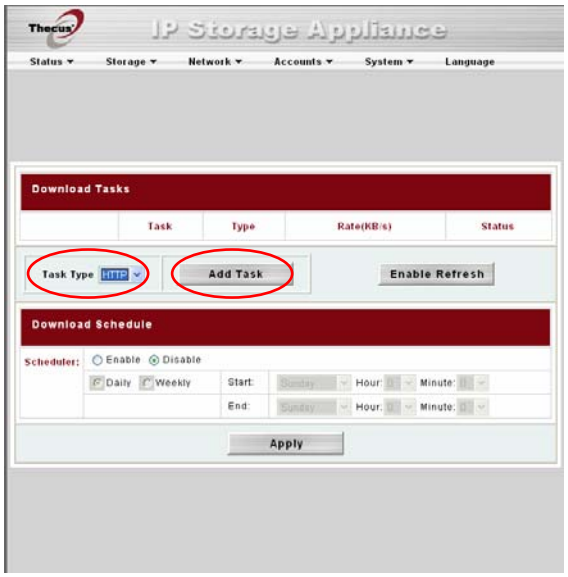


Download Tasks	
Item	**Description**
▶	Click to start the specified task.
⏸	Click to pause the specified task.
✕	Click to delete the specified task. A prompt will appear asking you if you would like to delete the task itself, or the task and all related downloaded files.
Task	Name of the task. Click to see more information about this task.
Type	Type of transfer. Can be **HTTP**, **FTP**, or **BT**.
Rate	Transfer rate of the task in kilobytes per second (KB/s). **DL:** Download rate **UL:** Upload rate
Status	Status of the task. **Complete:** Percentage complete (%) **Completed / Total download size**
Task Type	Use this dropdown to select the type of transfer. **HTTP**, **FTP**, and **BT** are available.
Add Task	Click to add the kind of task specified beside "**Task Type**".
Enable Refresh	Click to refresh the task list.

Adding an HTTP Task

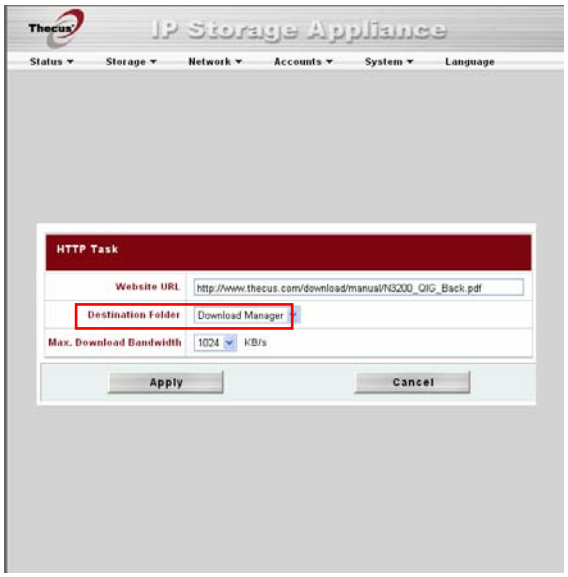
To add a new HTTP task to the Download Manager, follow these steps:

1. Using the **Task Type** dropdown, select **HTTP** and click **Add Task**.



2. In the **HTTP Task** window, start by inputting the target URL in the **Website URL** box. This is the link to the download you want to queue.

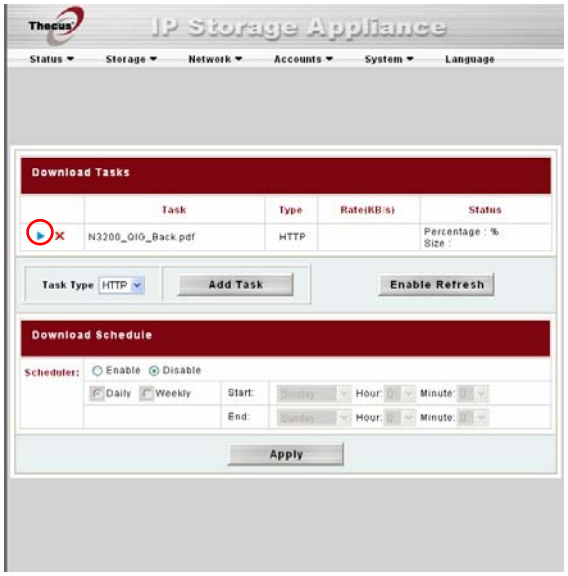
3. Next, select the destination folder from the **Destination Folder** dropdown. This is where the download will reside



4. Select the maximum download bandwidth from the **Max. Download Bandwidth** dropdown.

5. Press **Apply** to add the task.

6. Once added, your download will appear in the list of download tasks. To start the download, simply click the **Start** icon ( ) and the download will begin.

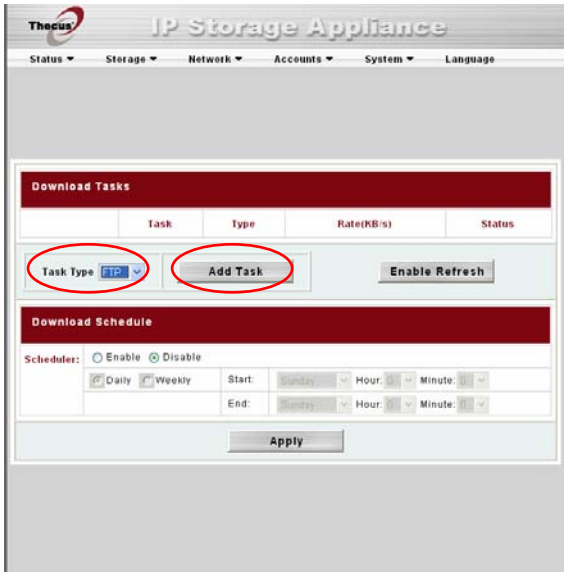


7. The download status will continually update in the **Download Tasks** window. To pause the download, click the **Pause** icon ( ).

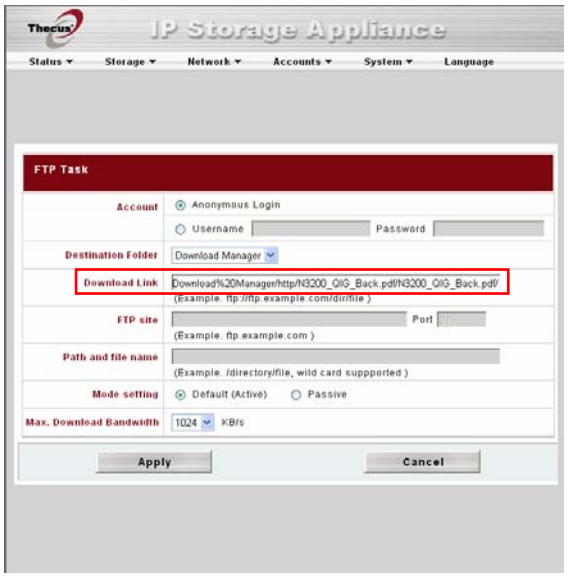
Adding an FTP Task

To add a new FTP task to the Download Manager, follow these steps:

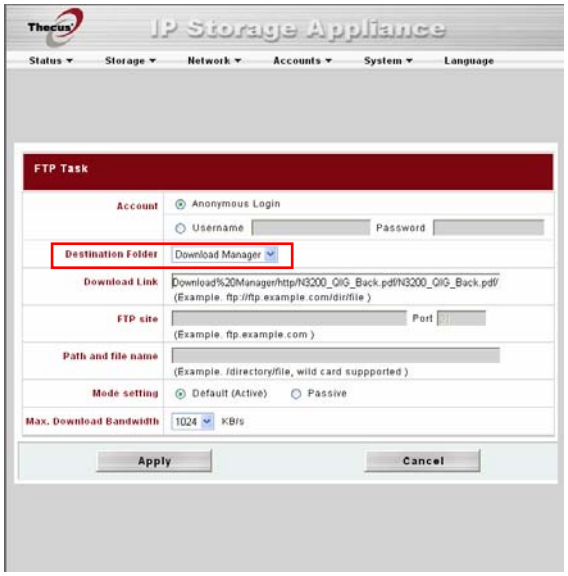
1. Using the **Task Type** dropdown, select **FTP** and click **Add Task**.



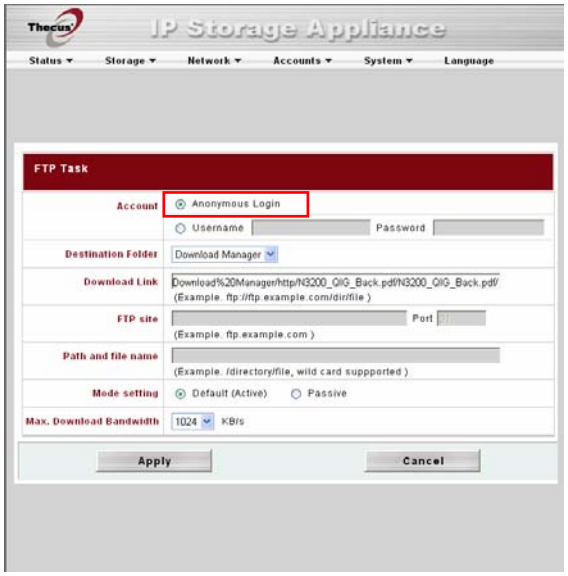
2. In the **FTP Task** window, start by inputting the target URL in the **Download Link** box. This is the link to the download you want to queue.



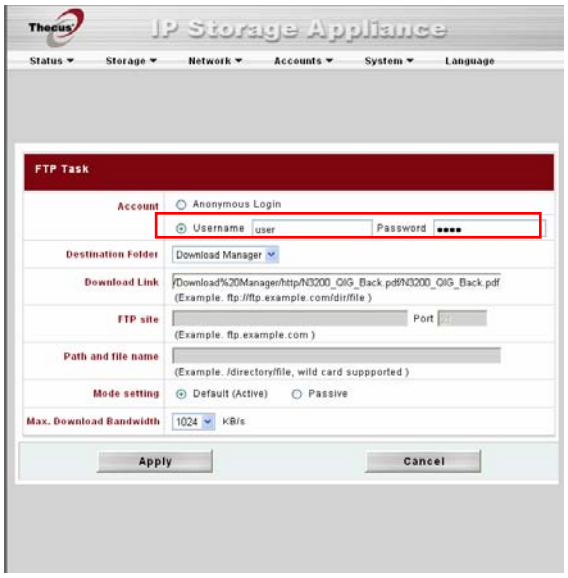
3. Next, select the destination folder from the **Destination Folder** dropdown. This is where the download will reside.



4. The next step depends if you are using an anonymous login for your FTP download. If you are logging in anonymously, select **Anonymous Login** and move on to step 5.



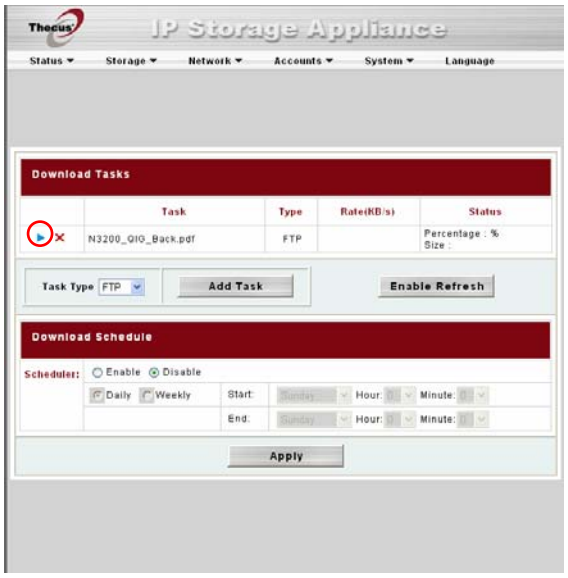
If you are required to login with a user name and password, select **Username** and input your user name and password into the appropriate fields.



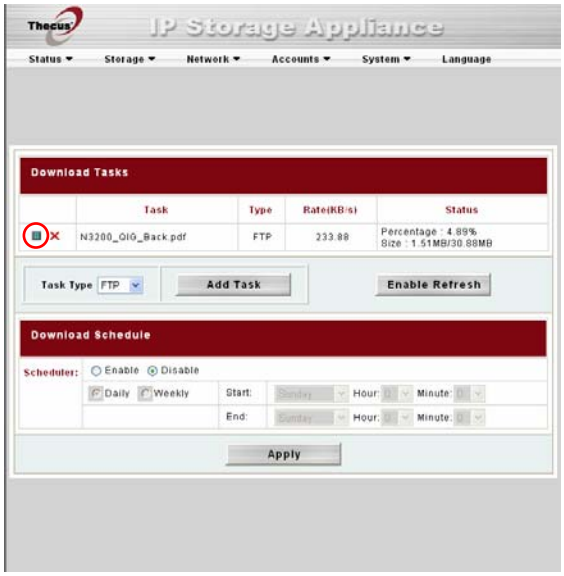
5. Select the maximum download bandwidth from the **Max. Download Bandwidth** dropdown.

6. Press **Apply** to add the task.

7. Once added, your download will appear in the list of download tasks. To start the download, simply click the **Start** icon (▶) and the download will begin.



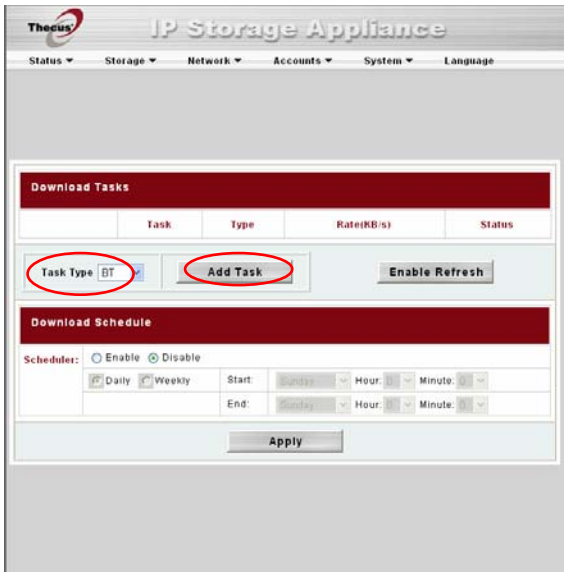
8. The download status will continually update in the **Download Tasks** window. To pause the download, click the **Pause** icon (⏸).



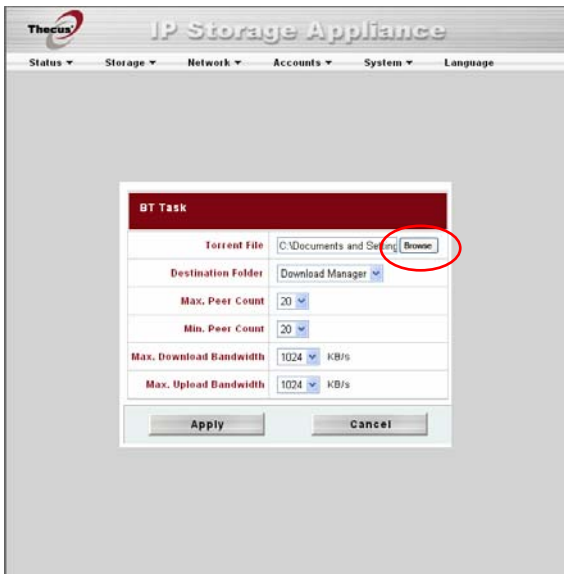
Adding a BT Task

To add a new BT task to the Download Manager, follow these steps:

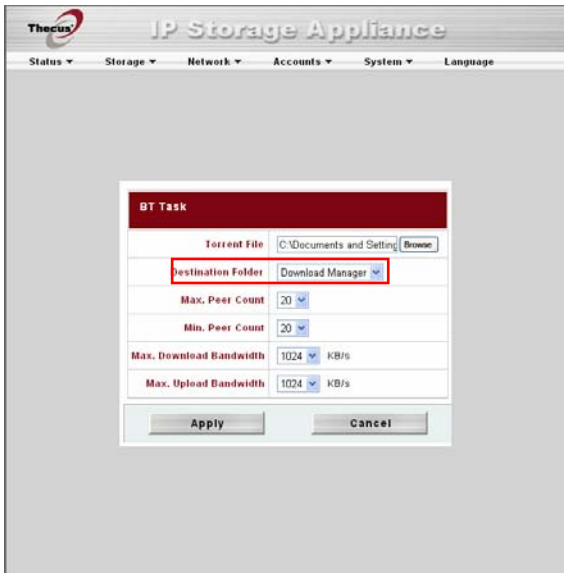
1. Using the **Task Type** dropdown, select **BT** and click **Add Task**.



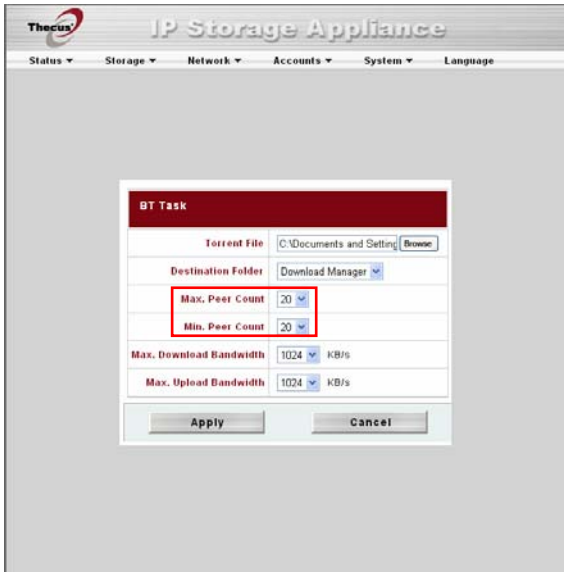
2. In the **BT Task** window, start by clicking **Browse…** and selecting the torrent file you wish to start.



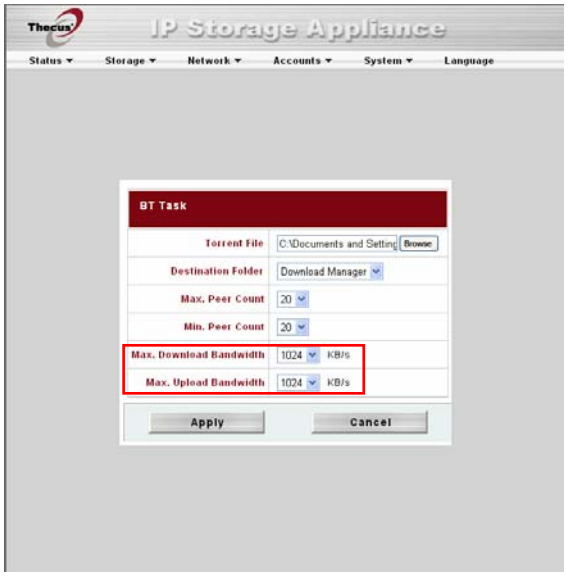
3. Next, select the destination folder from the **Destination Folder** dropdown. This is where the download will reside.



4. Next, you can select the maximum and minimum number of peers from selecting the counts from the appropriate dropdowns.

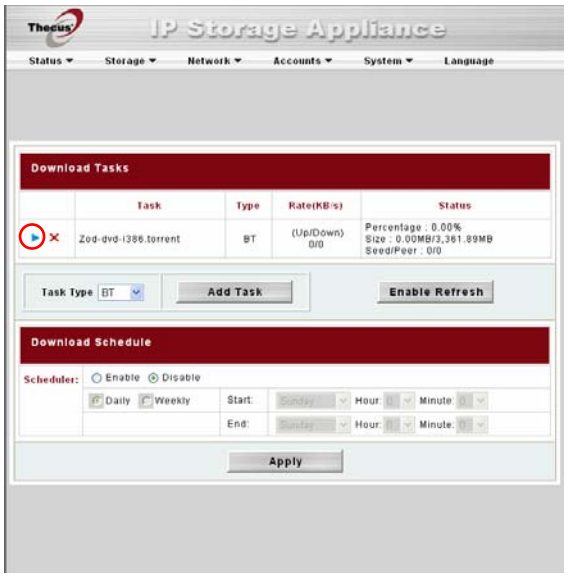


5. Next, you can set the maximum download and upload bandwidths from the dropdowns below.

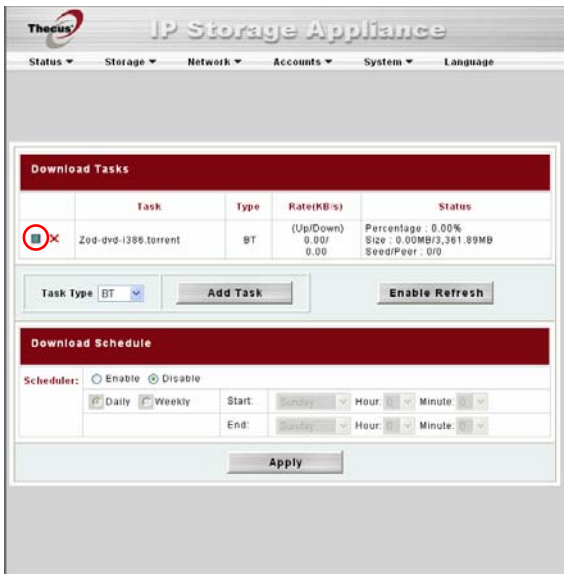


6. Press ***Apply*** to add the task.

7. Once added, your download will appear in the list of download tasks. To start the download, simply click the **Start** icon (▶) and the download will begin.



8. The download status will continually update in the Download Tasks window. To pause the download, click the **Pause** icon (⏸).



Deleting Tasks

To delete a task, simply follow the steps below:

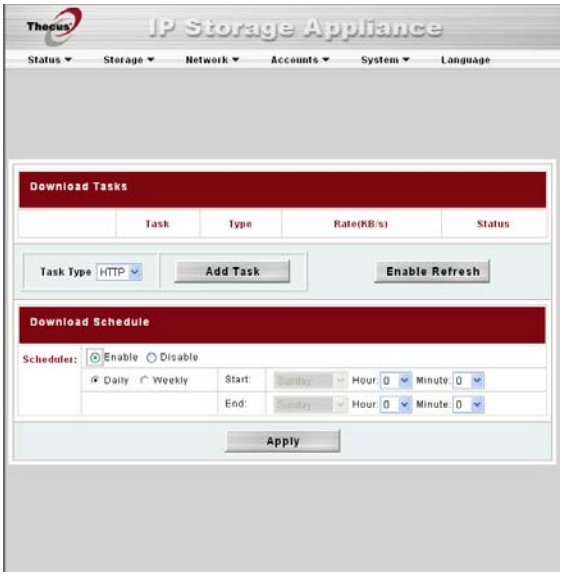
1. Click the **Delete** icon (✕) beside the task that you wish to delete. The **Delete Task** dialogue box will appear.

2. Select **Delete Task only** if you wish to remove only the torrent file and all transient files, leaving the unfinished download files intact.

3. Select **Delete Task and Files** if you wish to remove the torrent file and all transient files, and the unfinished download files.
4. Click ***OK*** to delete the task. Click **Cancel** to return to the **Download Manager**.

Scheduling Downloads

With the Download Manager, you can schedule your downloads to begin at different times of the day. This is useful if you wish to complete your downloads during off-peak hours, reserving your bandwidth for other applications. A table describing the Download Schedule window appears below:

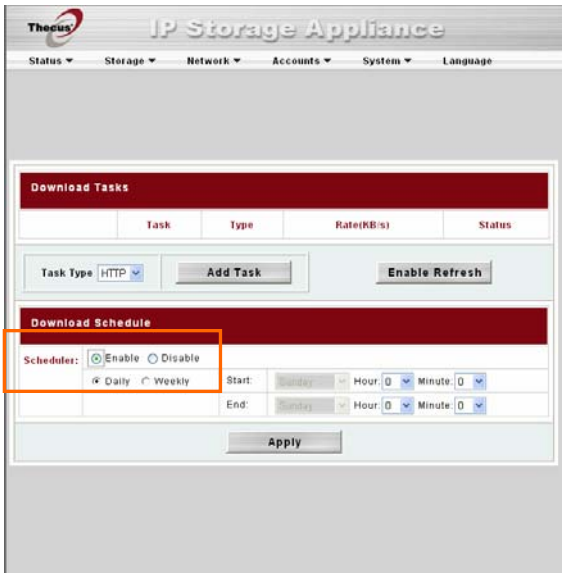


Download Schedule	
Item	**Description**
Scheduler	Enable or disable the Download Scheduler.
Daily/Weekly	Choose to have the Download Scheduler activate on a daily or weekly basis.
Start: Day/Hour /Minute	Specify the start day/hour/minute for the download task.

End: Day/Hour/Minute	Specify the end day/hour/minute for the download task.

To schedule downloads, follow these steps:

1. Under **Download Schedule**, set **Scheduler** to **Enable**.
2. To schedule a **daily** download period, select **Daily** and select a start time and end time. To schedule a **weekly** download period, select **Weekly** and select a start day/time and end time/day.
3. Click **Apply** to save your changes.



NOTE

If the Download Scheduler is enabled, ALL download tasks will adhere to the designated schedule.

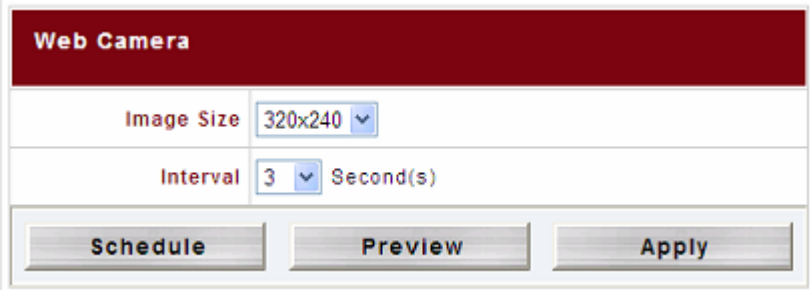
Web Cam Server

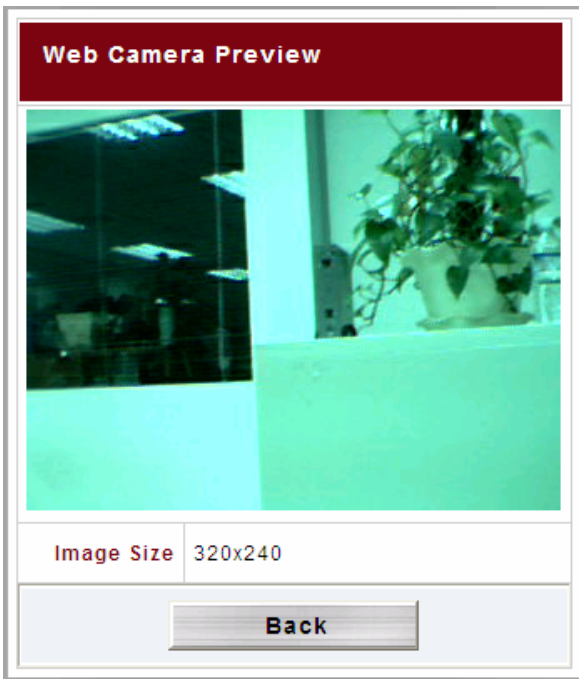
With the Web Cam Server, you can schedule the N0204 miniNAS to capture images with a connected USB webcam. To configure the Web Cam Server, go to **Status**, choose the ***Web Camera*** option, and the **Web Camera** window appears.

Web Camera	
Item	**Description**
Image Size	Select an image size for each captured image. Can be 160x120, 320x240, or 640x480.
Interval	Select an interval between each captured image.
Schedule	Click to schedule webcam image capture.
Preview	Click to preview the image capture.
Apply	Click to save your changes.

Web Cam Preview

From the **Web Camera** window, you can click the **Preview** button to view the image from the Web Cam before setting up the recording schedule if you wish.





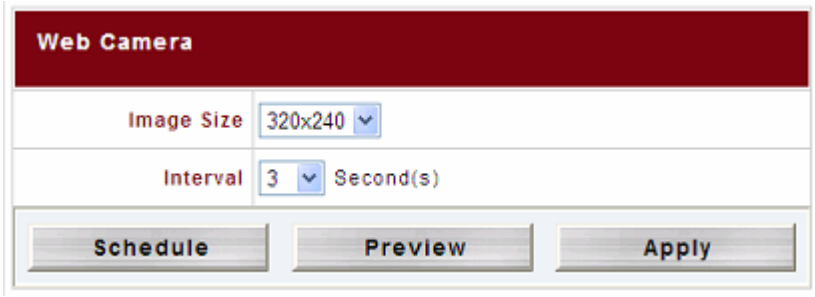
Note:
Picture quality may vary due to the number of different USB Web Cams on market with varying hardware components.

Once you are happy with the Web Cam preview, your can select the resolution you want. There are 3 different choices:

- 160x120
- 320x240
- 640x480

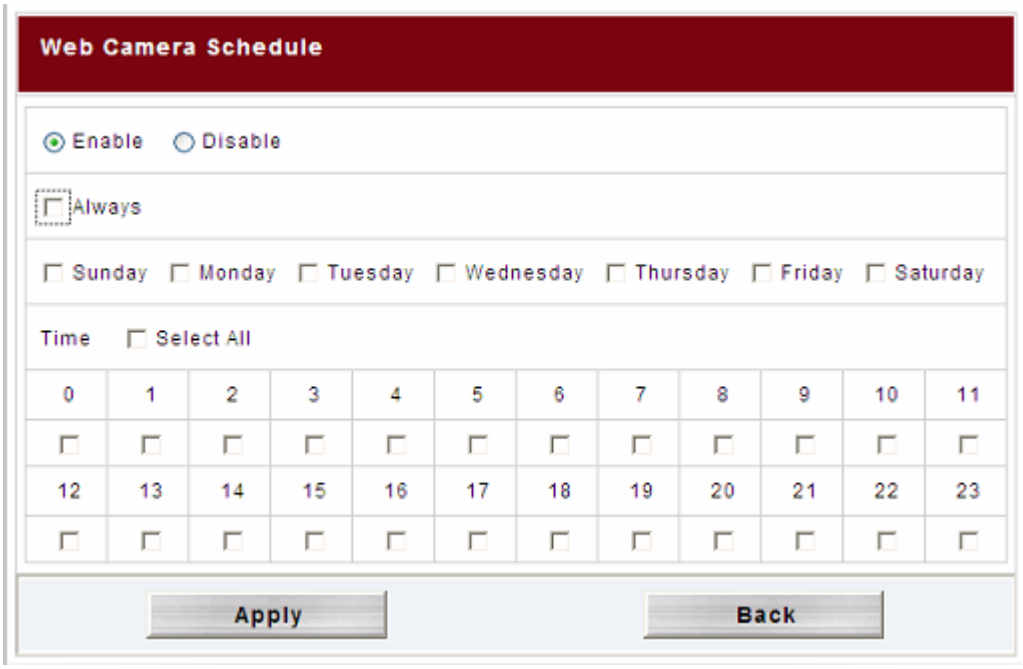
Use the drop down to select the desired recording interval.

Click **Apply** to save your changes.



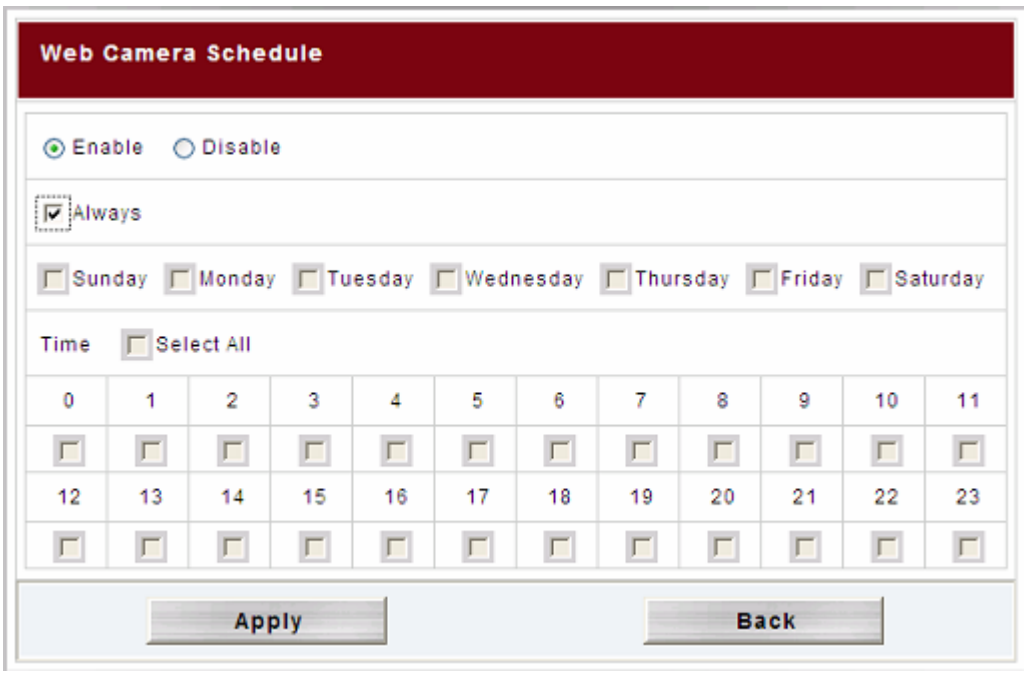
Adding a Web Cam Schedule

After finishing with the basic settings, we need to now configure the capture schedule. To do this, begin by activating the schedule function by selecting **Enable** in the **Web Camera Schedule** window.

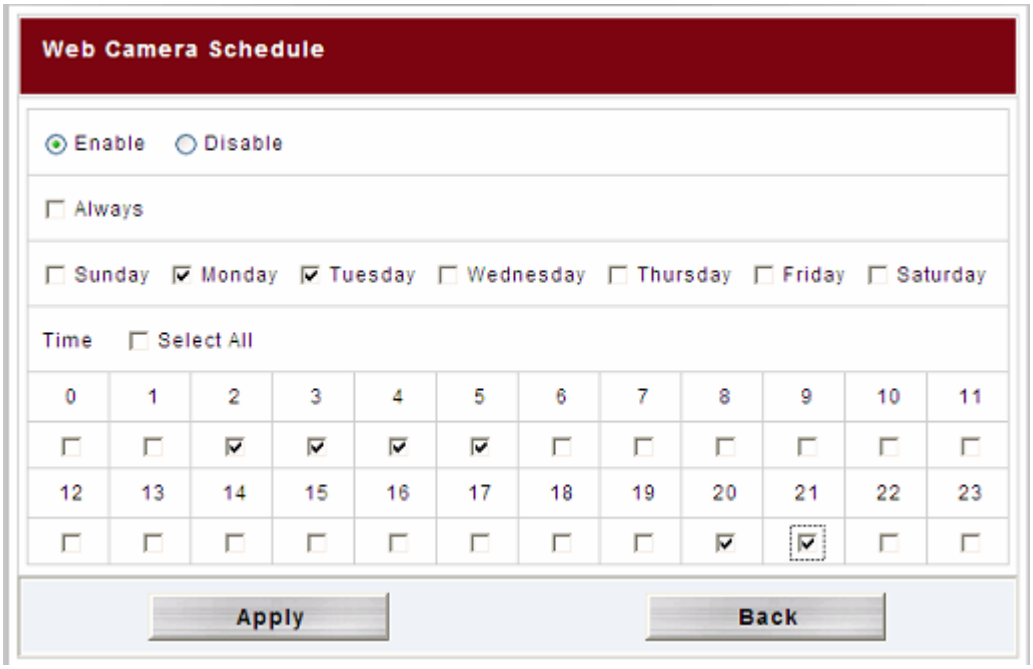


Next, select time slot you want to record through the Web Cam.

Note: If ***Always*** is selected, it will start to record right away and will not stop until the **Web Camera Schedule** is set to **Disabled**.



Alternatively, you can schedule the Web Cam to capture daily or hourly. Take a look at the example below. It will record every Monday and Tuesday from 2:00 – 6:00 and from 20:00 – 22:00.



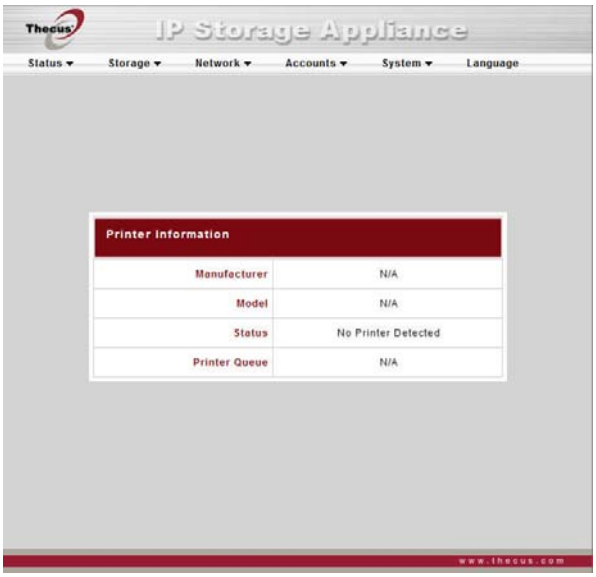
One important point worth mentioning is how captured picture is stored. The folder where captured images are stored is the **Video** system folder, which is associated with the system-created **Web Cam** sub folder. See the figure below for reference:

The Web Cam will capture images according to the designated schedule. The files will be stored using following path:

Video + Webcam + date + hour (path)→ filename. jpg

Printer Server

You can configure the N0204 miniNAS to act as a printer server. That way, all PCs connected to the network can utilize the same printer.



Windows XP SP2

To set up the Printer Server in Windows XP SP2, follow the steps below:

1. Connect the USB printer to **USB 1.1 port in the Rear Panel** (front USB 2.0 ports can be used for external HDD or Wireless USB dong enclosures).
2. Go to **Start** > **Printers and Faxes**.
3. Click on **File** > **Add Printer**.
4. The **Add Printer Wizard** appears on your screen. Click **Next**.
5. Select the "***A network printer or a printer attached to another computer***" option.
6. Select "***Connect to a printer on the Internet or on a home or office network***", and enter the following address into the URL field: "***http://N0204 miniNAS_IP_ADDRESS:631/printers/usb-printer***".
7. Your Windows system will ask you to install drivers for your printer. Select correct driver for your printer.
8. Your Windows system will ask you if you want to set this printer as "Default Printer". Select **Yes** and all your print jobs will be submitted to this printer by default. Click **Next**.
9. Click ***Finish***.

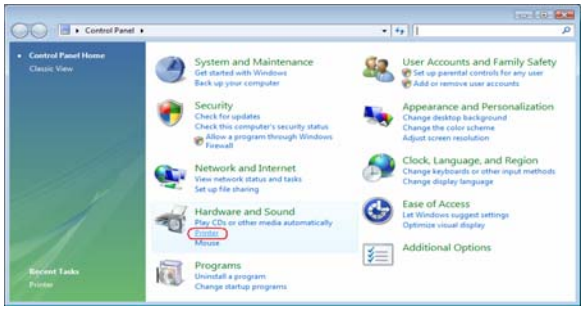
NOTE

- Not all USB printers are supported. Please check Thecus website for a list of supported printers.
- Note that if a multi-function (all-in-one) printer is attached to the N0204, usually only the printing function will work. Other features, such as scanning, probably will not function.

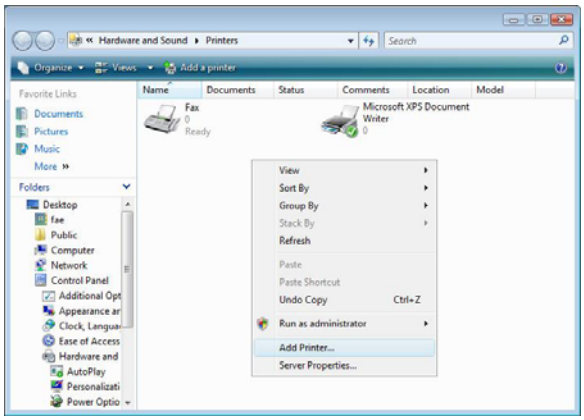
Windows Vista

To set up the Printer Server in Windows Vista, follow the steps below:

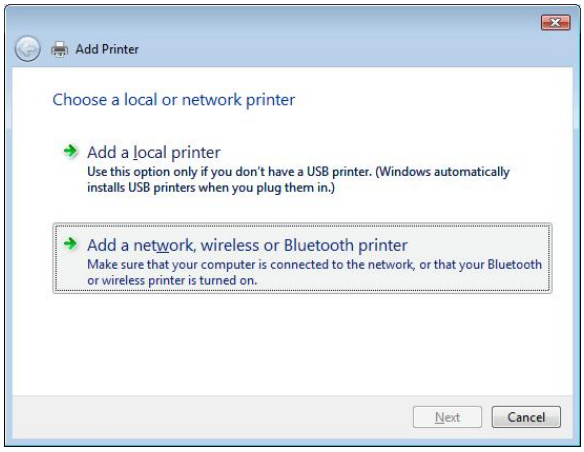
1. Open **Printer Folder** from the **Control Panel**.



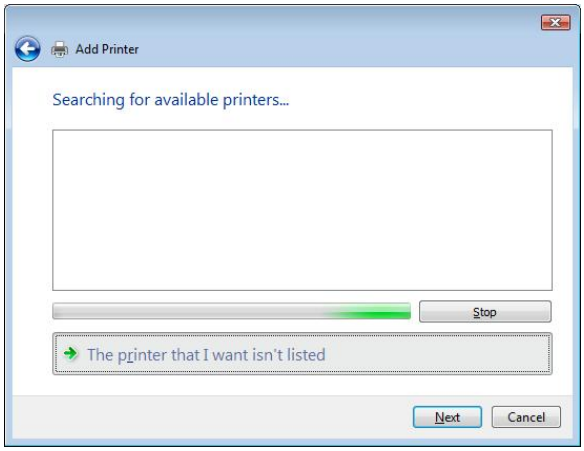
2. Click the **right mouse button** in anywhere on the **Printers** folder and then select **Add Printer**.



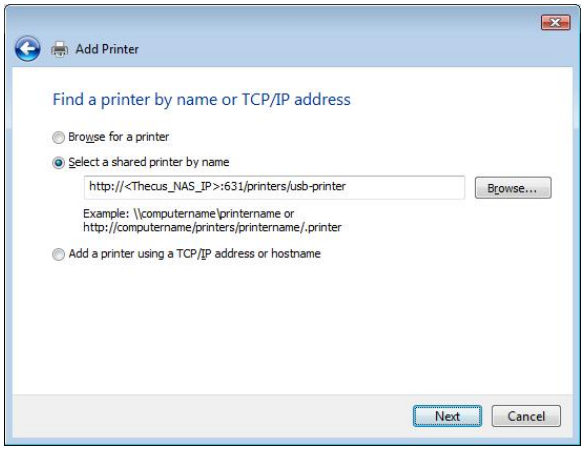
3. Select "**Add a network, wireless or Bluetooth printer"**.


Add Printer
Choose a local or network printer
Add a local printer
Use this option only if you don't have a USB printer. (Windows automatically installs USB printers when you plug them in.)
Add a network, wireless or Bluetooth printer
Make sure that your computer is connected to the network, or that your Bluetooth or wireless printer is turned on.
Next
Cancel

4. Select "**The printer that I want isn't listed"**. You can press "**The printer that I want isn't listed"** to go into next page without waiting for "**Searching for available printers"** to finish

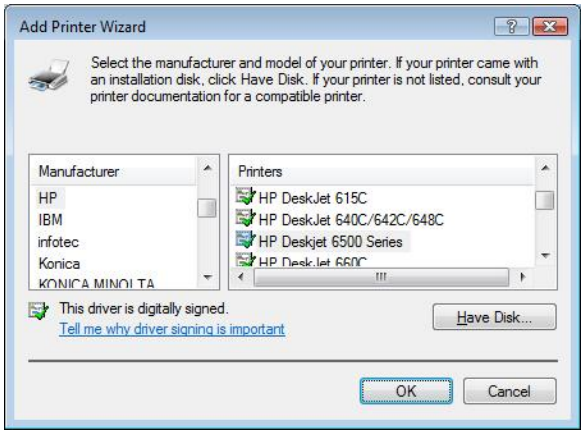


5. Click "**Select a shared printer by name"**.



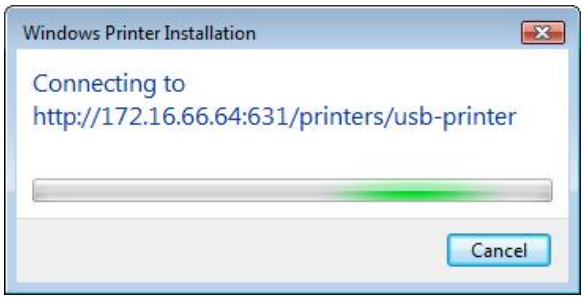
Type: **http://<Thecus_NAS>:631/printers/usb-printer** in the box, where <Thecus_NAS_IP> is the IP address of the N0204 miniNAS. Click **Next**.

6. Select or install a printer and then press **OK**.

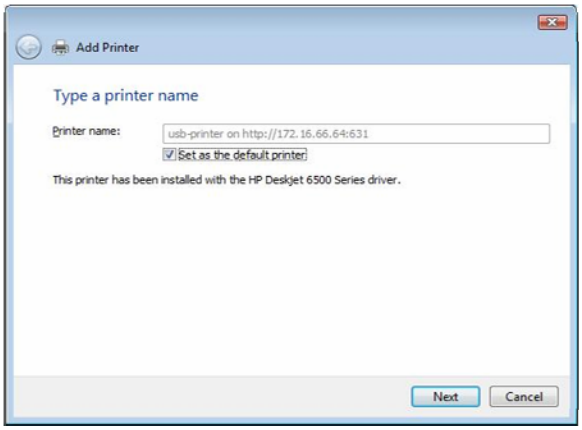

Add Printer Wizard
Select the manufacturer and model of your printer. If your printer came with an installation disk, click Have Disk. If your printer is not listed, consult your printer documentation for a compatible printer.
Manufacturer
HP
IBM
infotec
Konica
Printers
HP DeskJet 615C
HP DeskJet 640C/642C/648C
HP Deskjet 6500 Series
This driver is digitally signed.
Tell me why driver signing is important
Have Disk...
OK
Cancel

If your printer model is not listed, please contact your printer manufacturer for help.

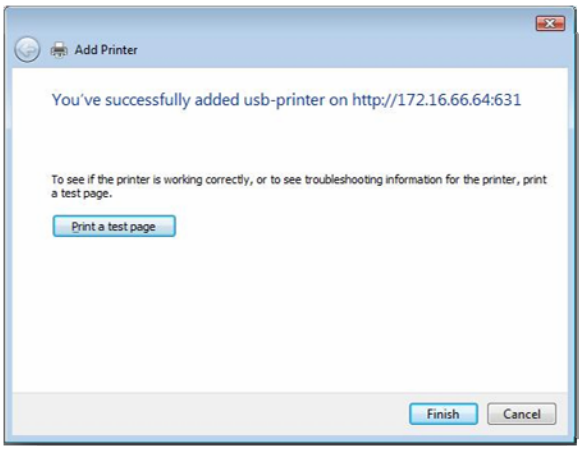
7. Windows will attempt to connect to the printer.



8. You can choose to set this printer as the default printer by checking the **Set as the default printer** box. Click **Next** to continue.



9. Done! Click **Finish**.


Add Printer
You've successfully added usb-printer on http://172.16.66.64:631
To see if the printer is working correctly, or to see troubleshooting information for the printer, print a test page.
Print a test page
Finish
Cancel

Chapter 6: Using the N0204 miniNAS

Overview

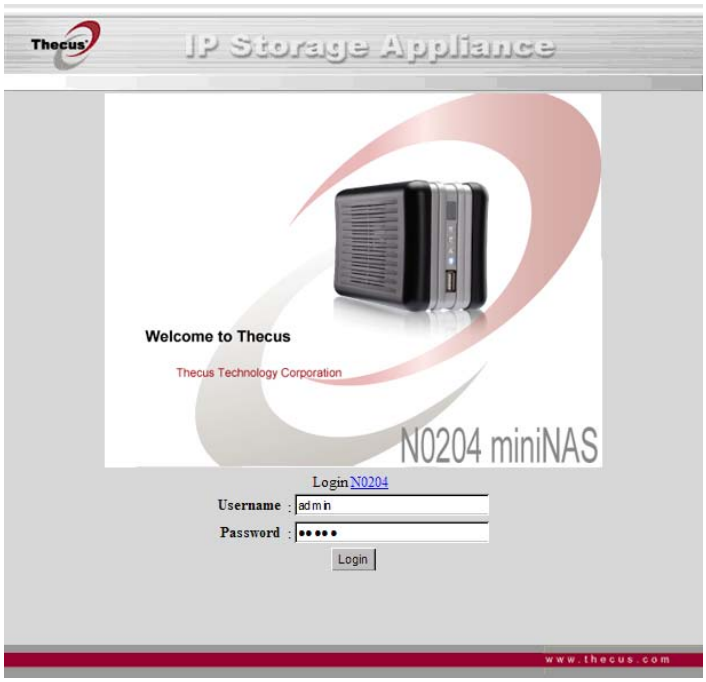
Once the N0204 miniNAS is setup and operating, users on the network may manage all varieties of digital music, photos, or files by simply using their web browsers. To manage your personal files or access public files on the N0204 miniNAS, just enter its IP address into your browser (IP address can be viewed by Setup Wizard), and you will be taken to the **N0204 miniNAS Login** page.

NOTE

Before proceeding, make sure that WebDisk Support or Secure WebDisk Support is enabled in the Service Support screen in the system's **Network** menu. See Service Support in Chapter 4: System Management > Network Management > Web Services Configuration.

Login Page

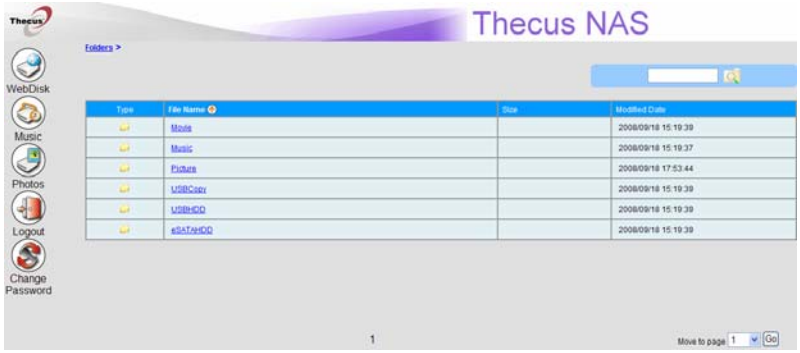
To login to the system, enter your user name and password which was created by Administer, and click ***Login*** to log into the system. You will be taken to the **Web User Interface**.



Web User Interface

The Web User Interface is where users interact with the N0204 miniNAS, and manage all sorts of digital media. The simple layout makes it easy for anyone to enjoy the many features of the N0204 miniNAS.

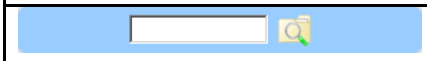
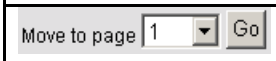
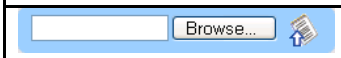
On the left of the interface is the **Main Menu**, where you can easy access the **WebDisk**, **Music**, and **Gallery** functions of the N0204 miniNAS. Along the top of the interface, you to choose to browse all storage devices connected to the N0204 miniNAS, including SATA and USB disks, and contents stored from the USB One-Button Copy function.



Web User Interface	
Item	**Description**
WebDisk	Click to use the **WebDisk** function.
Music	Click to use the **Music** function.
Photos	Click to use the **Photo Gallery** function
Login	Click to login to the N0204 miniNAS.
Logout	Click to return to the N0204 miniNAS Login page.
Change Password	Click to change your login password.

Using WebDisk

1. When any user clicks on the **WebDisk** icon, they will see all available public folders.
2. When they click on the name of a public folder, they will see the files within that folder.
3. When user clicks on a file name, the file will be downloaded.

WebDisk		
Icon	**Function**	**Description**
	File Search	Search for specific files or folders.
	Sort	Arrange all files and folders by type, name, size, or last modified date.
	Delete	Delete the selected files or folders.
	Page Number	Use this to navigate when multiple pages are required to list the contents of the selected directories.
	Create New Folder	Enter a new folder name and press the **Create** button.
	Upload Files	Browse to the desired file location and press the Upload button.

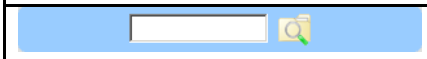
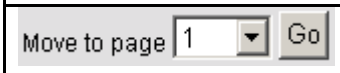
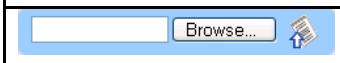
NOTE The Delete, Create New Folder, and Upload Files options are only visible if the user has write access to the specific folder.

For more information on how to setup user rights to the folders, please check ***Chapter 3: System Management > Storage Management > Folder Management > Folder Access Control List (ACL)***

To access folders with access control, you must first login with a local user account. To log in, please click on the **Login** icon on the lower left hand corner.

Using Music Server

To manage your digital music and share it with iTunes clients on the network, click on the **Music** icon from the left panel.

Music		
Icon	**Function**	**Description**
	File Search	Search for specific files or folders.
	Sort	Arrange all files and folders by type, name, size, or last modified date.
	Delete*	Delete the selected files or folders.
	Page Number	Use this to navigate when multiple pages are required to list the contents of the selected directories.
	Create New Folder*	Enter a new folder name and press the **Create** button.
	Upload Files*	Browse to the desired file location and press the Upload button.

NOTE The Delete, Create New Folder, and Upload Files options are only visible if the user has write access to the specific folder.

Adding Music Files

You could add music files into iTunes Server through Web User Interface; however, if you have lots of folders and files to upload, there is a simpler way.

1. Open a Windows Explorer and type the N0204 miniNAS IP address in the address bar (i.e. \\192.168.1.100).

2. Double click the **Music** folder to enter it. Then drag and drop music folders and files here.

3. The N0204 miniNAS iTunes server will take some time to cache the ID3 tag of every file. Once the process is done, you will see all the music files from iTunes clients.

Playing Music Files

Once your music files are added to the N0204 miniNAS, playing them on any iTunes-equipped computer connected to the network is easy:

1. Open iTunes.

2. You should see **Thecus N0204 miniNAS** under the **SHARED** heading in the left hand menu.

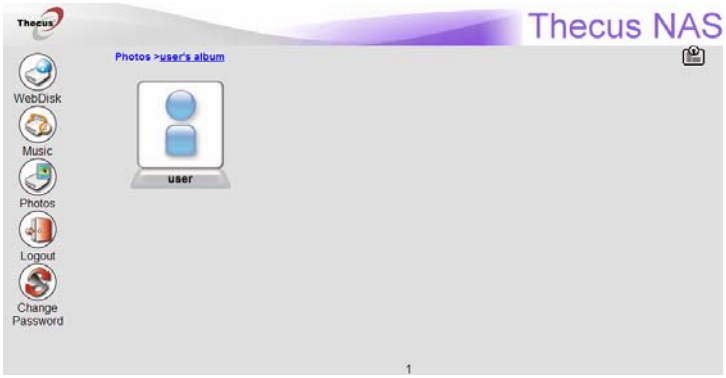
3. Click **Thecus N0204 miniNAS** and all shared music will be displayed, ready to be enjoyed right from iTunes.

Using Photo Gallery

Using the Photo Gallery, users can view and share photos, and even create their own albums right on the N0204 miniNAS. To manage your photo gallery or see other photo albums, click on the **Photos** icon from the left panel.

You will see your own Photo Gallery and all public Photo Albums on the network.

To manage any picture files, you must first select the item by clicking its check box.



Managing Albums and Photos

Photo		
Icon	**Function**	**Description**
	Make Cover	Make selected photo your cover picture.
	Back	Return to the previous screen.
	Add	Add a new album or photos.
	Modify	Edit the name and description of the selected album or photo. Each name is limited to 20 characters and each description is limited to 255 characters.
	Delete	Delete the selected albums or photos.

NOTE

- Only logged in users will see these icons.
- To prevent system errors, the N0204 miniNAS sets the following limitations on photo files:
  - Each file upload is limited to a size of 8MB. Files exceeding 8MB will NOT be uploaded and no error message will appear.
  - Only these photo file types will be uploaded: *.jpg, *.gif, *.bmp, *.png, *.pcx, *.psd, *.bmp.
  - If duplicate file names exist during upload process, system will add a number in front of the original file name (abc → 1abc).

Creating Albums

To create a photo album, follow the steps below:

1. Click the **Add** button to create a new album.

2. Enter a name for the album, and enter a description if you wish. Then, click on the **Create Album** button.

Password Protecting Albums

If you would like to put a password on a particular album, follow these steps:

1. Select the album to be protected, click on the **Edit** button, and the **Album Edit** screen will appear.

2. The owner of the album can enter an album password to protect the album, so that only people with the correct password can view the album.

Uploading Pictures to Albums

Uploading pictures to albums using the Web User Interface is easy:

1. When the album is created, click the album icon to enter the album. Initially the album is empty.

2. Click the **Add** button to upload pictures into the album. The **Upload Photos** screen will appear. Users can select and upload up to 8 pictures at a time.

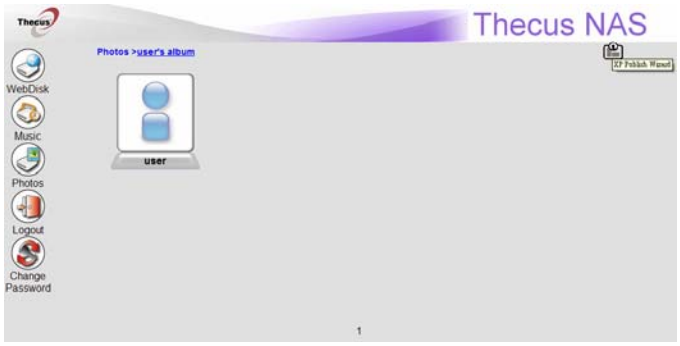
3. Once the picture is uploaded, you can view it in the album.

4. The owner of the album can delete or modify the pictures with the **Delete** or **Modify** buttons on the top right hand corner.

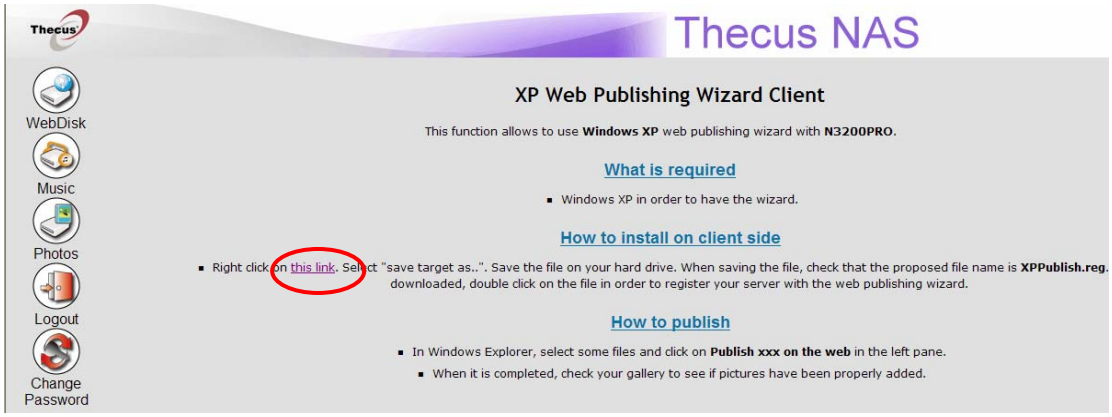
Windows XP Publishing Wizard

There are many ways for a local user to upload pictures into their photo album. Users of Windows XP can upload their pictures using the Windows XP Publishing Wizard.

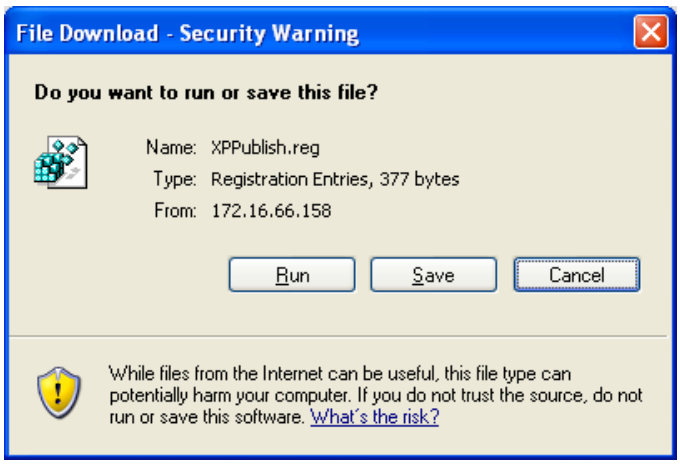
1. Click on the **XP Publishing Wizard** icon.



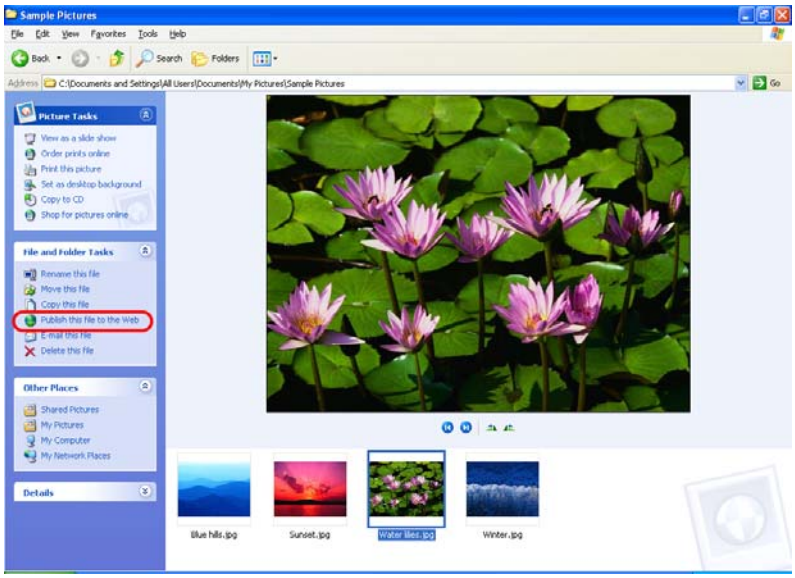
2. The **XP Web Publishing Wizard Client** screen appears. Click on the link to install the Publishing Wizard.


Thecus NAS
WebDisk
Music
Photos
Logout
Change Password
XP Web Publishing Wizard Client
This function allows to use Windows XP web publishing wizard with N3200PRO.
What is required
Windows XP in order to have the wizard.
How to install on client side
Right click on this link. Select "save target as..". Save the file on your hard drive. When saving the file, check that the proposed file name is XPPublish.reg. downloaded, double click on the file in order to register your server with the web publishing wizard.
How to publish
In Windows Explorer, select some files and click on Publish xxx on the web in the left pane.
When it is completed, check your gallery to see if pictures have been properly added.

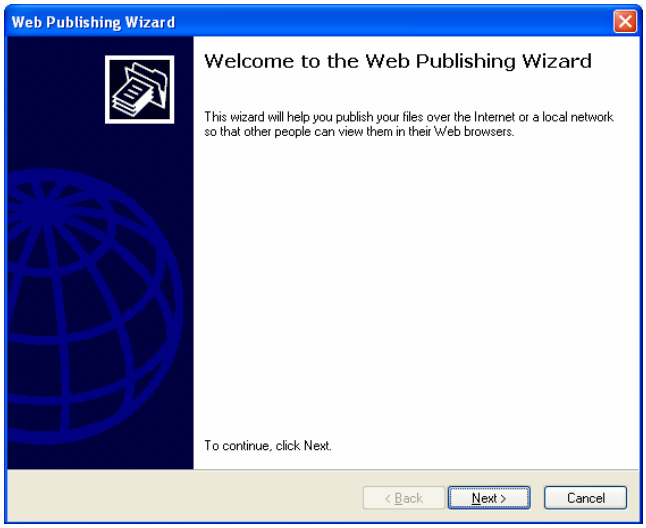
3. Windows XP will ask whether you want to run or save this file. Click ***Run***.


File Download - Security Warning
Do you want to run or save this file?
Name: XPPublish.reg
Type: Registration Entries, 377 bytes
From: 172.16.66.158
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

4. Once the Wizard is installed, use the Windows file manager to browse the folder that contains the picture you want to publish. On the left pane, there will be an icon labeled "**Publish this folder to the Web**".



5. Click on this icon and **Web Publishing Wizard** will start.

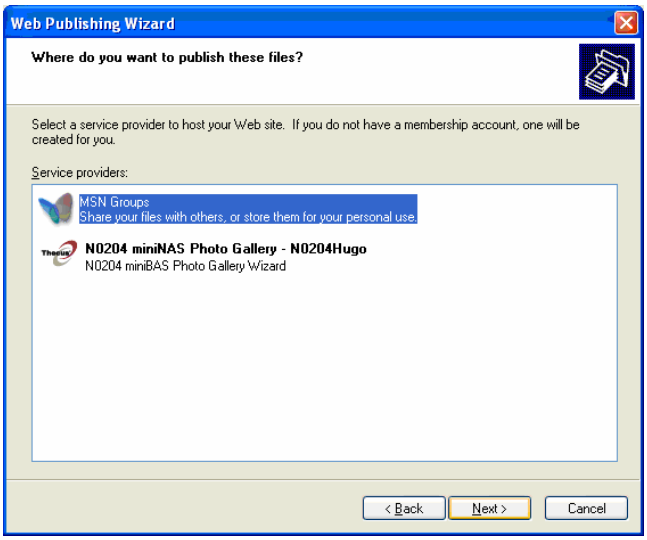

Web Publishing Wizard
Welcome to the Web Publishing Wizard
This wizard will help you publish your files over the Internet or a local network so that other people can view them in their Web browsers.
To continue, click Next.
< Back
Next >
Cancel

6. Select the pictures you want to publish to the Photo Web Server by placing a check mark on the top left hand corner of the picture. Click ***Next***.

Web Publishing Wizard
Change Your File Selection
You can publish the files that have check marks. If you do not want to publish a file, clear its check box.
50 files selected of 50
Select All
Clear All
< Back
Next >
Cancel

7. Your PC will start to connect to the Photo Web Server.

8. Select **N0204 miniNAS Photo Gallery Wizard** to publish your pictures to the N0204 miniNAS.


Web Publishing Wizard
Where do you want to publish these files?
Select a service provider to host your Web site. If you do not have a membership account, one will be created for you.
Service providers:
MSN Groups
Share your files with others, or store them for your personal use.
N0204 miniNAS Photo Gallery - N0204Hugo
N0204 miniBAS Photo Gallery Wizard
< Back
Next >
Cancel

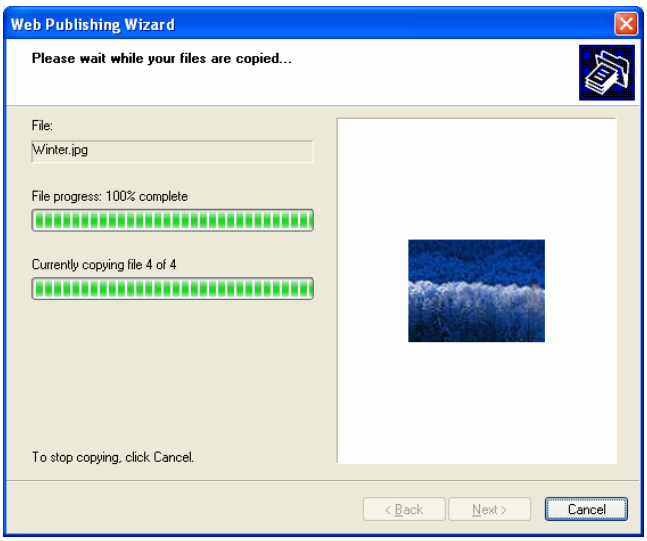
9. Login into the N0204 miniNAS with your local user name and password.

10. Create your album by entering an album name and clicking on the **Create Album** button.

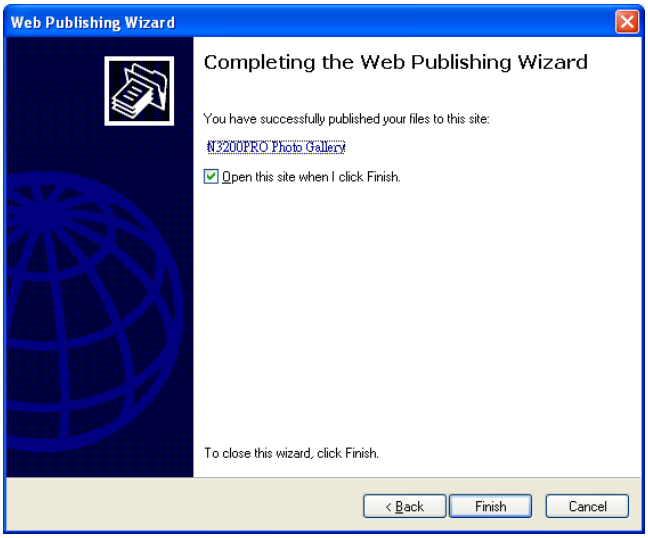
11. Select the album you want to upload your pictures to.

12. Confirm the target album.

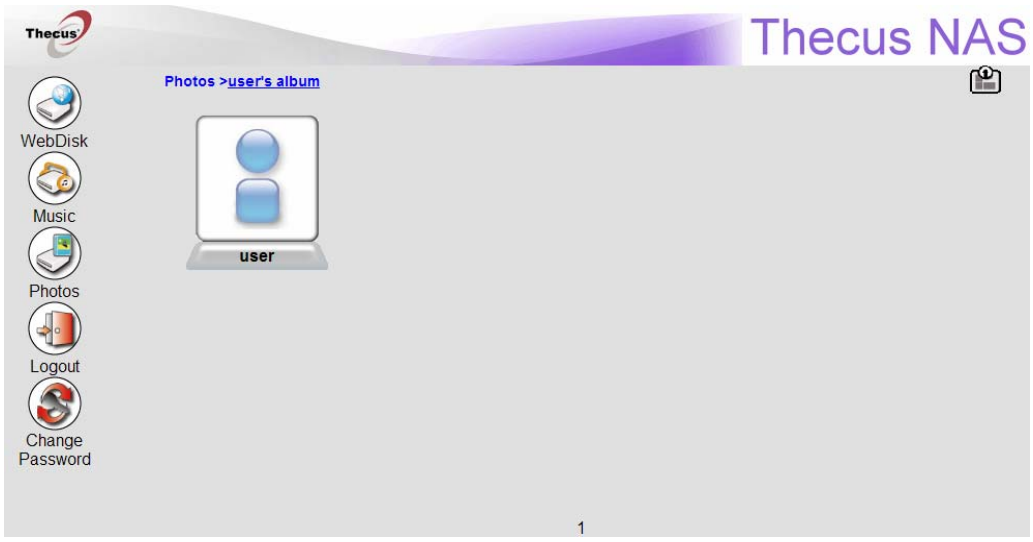
13. Windows will show you that the picture upload is in progress.



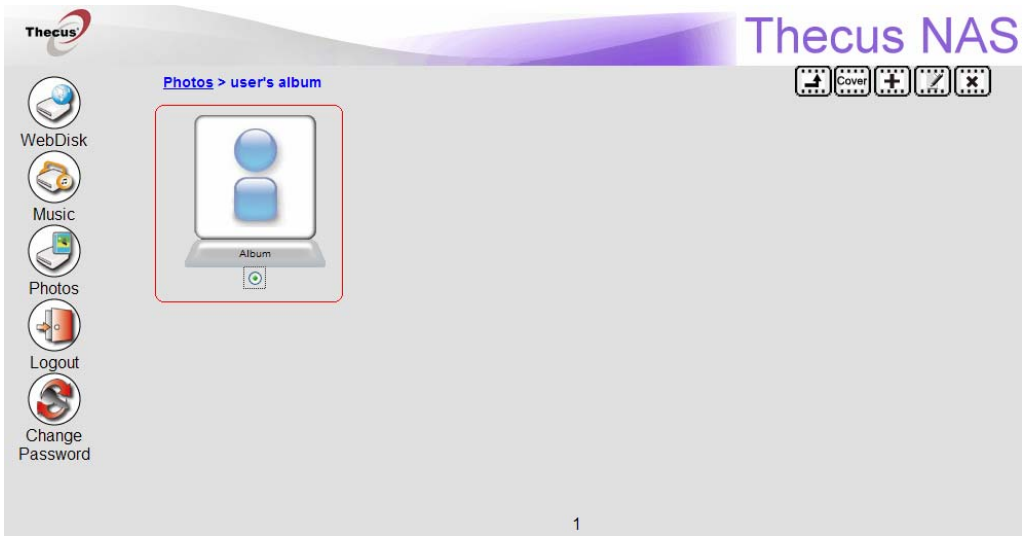
14. When the upload is finished, the Wizard will ask you whether if you want to go to the website. Click **Finish** to go to your Photo Web Server.


Web Publishing Wizard
Completing the Web Publishing Wizard
You have successfully published your files to this site:
N3200PRO Photo Gallery
Open this site when I click Finish.
To close this wizard, click Finish.
< Back
Finish
Cancel

15. Click on the user's icon to go to that user's album.



16. You will see the user's album list. Click on **Album**.



17. Finished! You will see the pictures just selected in the album.

EXIF Information

While viewing pictures, you can also have the N0204 miniNAS display the EXIF information for each photo.

Simply click the ***EXIF*** button to display EXIF information. To hide this information, click the ***EXIF*** button again.

Slide Shows

Slide shows are a great way to enjoy pictures stored on your N0204 miniNAS.

You can click on the ***Start Slide Show*** icon on the top right hand corner to start the slide show.

To stop the slide show, click on the ***Stop Slide Show*** icon on the top right hand corner.

Mapping a Client PC to the N0204 miniNAS

You can map share folders on the N0204 miniNAS so that you can access them as if they were drives on your computer. You can connect to the shared network folders on the N0204 miniNAS as follows:

Windows

1. Go to the **My Computer** folder in Windows.
2. In the menu bar, select ***Tools*** and then ***Map Network Drive…***
3. The **Map Network Drive** window appears.
4. Assign a drive letter for the share folder.
5. Click the ***Browse*** button to find the folder over your network. Alternatively, you may enter the folder name you wish to connect to or enter its IP address. (i.e. \\192.168.1.100\share)
6. Click ***Finish***. When the **Connect As…** window appears, enter your user name and password.
7. Click ***OK***. The share folder appears as the drive you assigned. You can now access this folder as though it were a drive on your computer.

Apple OS X

On an Apple computer, you can connect to shared computers and servers using a network address.

1. Choose ***Go*** > ***Connect to Server…***

2. Enter the network address for the server in the Server Address text box.
   When connecting using SMB/CIFS protocol, type:
   smb://192.168.1.100/Folder1
   When connecting using AFP protocol, type:
   afp://192.168.1.100/Folder1
   Click **Connect**.

3. When MAC OS X is trying to connect N0204 miniNAS, it will ask for a User Name and Password which has access to the folder.

4. When MAC OS X has connected to the N0204 miniNAS successfully, an icon representing the folder will appear on the MAC OS X desktop. You can access the folder by double clicking on the icon.

File Backup

There are a number of ways to back up data with the N0204 miniNAS.

Thecus Backup Utility

The Thecus Backup Utility is on your Installation CD. When you click on the CD, the Backup Utility will be installed under **Program Groups** > **Thecus** > **Thecus Backup Utility**. If it is not installed, you can copy the file (**Thecus Backup Utility.exe**) to a convenient location on your hard disk and double click to execute it.

NOTE

If you can not find Thecus Backup Utility on your CD, please download it from the Thecus website (http://www.thecus.com).

When you execute this utility for the first time, it will ask you whether to create a DB file. Click **Yes**.

1. Click **Add** to create a Backup task. The **Add New Task** dialog box appears.

Add New Task	
Item	**Description**
Task	Specifies a name for the current task.
Source	Click to specify the source folder/file location.
Incremental	Click to specify whether the backup will be incremental. If unchecked, the backup will be a full backup.
Destination	Click to specify the destination folder/file location.
Excluded extensions	Files with these file name extensions will be skipped and not back up to the destination.
Comments	If you wish, enter comments here for your records.

2. To schedule the task to run at regular intervals, click on the **Schedule** icon for that task. You can schedule the task to run **Monthly** or **Weekly**.
3. To check the log for that task, click on the **Log** icon for that task.

NOTE

Thecus Backup Utility also supports MAC OS X. Just copy the Thecus Backup Utility.dmg to your MAC OS X machine and double click to execute it.

Windows XP Data Backup

If you use Windows XP Professional, you can also use the Windows Backup Utility (Ntbackup.exe) to backup your files.

If you use Windows XP Home Edition, follow these steps to install the utility:

1. Insert the Windows XP CD into a drive and double-click the ***CD*** icon in **My Computer**.
2. When the Welcome to Microsoft Windows XP screen appears, click ***Perform Additional Tasks***.
3. Click ***Browse this CD***.
4. In Windows Explorer, navigate to ***ValueAdd*** > ***Msft*** > ***Ntbackup***.
5. Double-click **Ntbackup.msi** to install the backup utility.

Once installed, you can use the Windows Backup Utility by following the steps below:

1. Click **Start**, and point to ***All Programs*** > ***Accessories*** > ***System Tools*** > ***Backup*** to start the wizard.
2. Click **Next** to skip past the opening page. Choose **Backup files and settings** from the second page, and then click **Next**.
3. Select which option you want to back up.
4. Click **Next** and in the Backup Type, Destination, and Name page, specify a back up location using the **Browse** button.
5. Find and select the drive that specifies your N0204 miniNAS as your backup destination and click **Next**.
6. Click **Next** to display the wizard's final page and click **Finish** to start backing up.

Apple OS X Backup Utilities

Mac OS X does not include any backup software. However, there are a number of backup solutions available for the Mac OS X, including: iBackup, Psyncx, iMSafe, Rsyncx, Folder Synchronizer X, Tri-BACKUP, Impression, Intego Personal Backup, SilverKeeper, and Apple's dotMac Backup utility to name just a few. To find even more freeware and shareware backup utilities to choose from, go to VersionTracker or MacUpdate and search on "backup".

Chapter 7: Tips and Tricks

USB Storage Expansion

The N0204 miniNAS supports external USB hard disks through its USB 2.0 ports. Once a USB hard disk has successfully mounted, the entire volume will be copied automatically to the default USB HDD folder. All file names on the USB disk volume are case sensitive.

Before attaching an USB disk drive to N0204 miniNAS, you have to partition and format it on a desktop computer or a notebook first. The attached USB storage device will be located at **\\N0204 miniNAS IP address\usbhdd\USB3** where the IP address of N0204 miniNAS and sdf1 stands for the first partition on disk #6, the USB disk drive. If it is an NTFS partition, NAS users can only open or copy files from \\N0204 miniNAS IP address\usbhdd\USB3, but cannot add new files or modify existing files.

NOTE

If you want to write to an USB storage device, the file system must be FAT32.

USB Storage	FAT32 Partition	NTFS Partition
Read	OK	OK
Write	OK	X

Remote Administration

You can set up your N0204 miniNAS for remote administration. With remote administration, you can access your N0204 miniNAS over the Internet, even if your N0204 miniNAS is behind a router. This is especially useful if you are traveling and suddenly need a file from your N0204 miniNAS.

Setting up remote administration is a three-part process, and will require the following equipment:

- Thecus N0204 miniNAS NAS device
- Cable/DSL Router with Dynamic DNS support
- Home PC
- Internet Connection

NOTE Router setup will differ slightly depending on router used. For this example, we will use the Asus WL500g because it has support for Dynamic DNS. Contact your router hardware vendor for setup help.

Part I - Setup a DynDNS Account

1. Go to http://www.dyndns.org from your home PC.
2. Click on the **Sign Up Now** link.
3. Check the Check boxes, select a user name (i.e.: N0204 miniNAS), enter your E-mail address (i.e.: xxx@example.com), check **Enable Wildcard**, and create a password (i.e.: xxxx).
4. Wait for an E-mail from www.dyndns.org.
5. Open the email and click on the link to activate your account

Part II - Enable DDNS on the Router

1. Go to the router setup screen and select ***IP Config*** > ***Miscellaneous DDNS Setting*** from your Home PC.

2. Click on **Yes** for **Enable the DDNS Client?**

3. Select **www.dyndns.org**.

4. Go to router setup screen, and enter the following information:
    a. User Name or E-mail Address: **xxx@example.com**
    b. Password or DDNS Key: **xxxx**
    c. Host Name: **www.N0204-miniNAS.dyndns.org**
    d. Enable wildcard? Select **Yes**
    e. Update Manually: Click **Update**

Part III - Setting up Virtual Servers (HTTPS)

1. Navigate to ***NAT Setting*** > ***Virtual Server***.

2. For **Enable Virtual Server?**, select **Yes**

3. Setup the HTTPS Server
    a. **Well-Known Applications**: Select **User Defined**
    b. **Local IP**: Enter: **N0204 miniNAS IP address, eg. 192.168.1.100**
    c. **Port Range**: **443** (the default HTTPS port setting on the N0204 miniNAS)
    d. **Protocol**: select **TCP**
    e. Click **Add**.
    f. Click **Apply**.

4. Test the HTTPS connection from another computer on the Internet.
    a. From a remote computer, open your browser and enter: **https://www.N0204-miniNAS.dyndns.org**
    b. You should see the login page of N0204 miniNAS.

Firewall Software Configuration

If you are using a software firewall (i.e. Norton Internet Security) and are having trouble connecting to the N0204 miniNAS, you can try the following steps:

1. Double click the **NIS** icon on system tray, and then configure the **Personal Firewall**.

2. On the **Programs** page, find the **SetupWizard.exe** and change its permission to "Permit All". If it's not in the program list, use the **Add** or **Program Scan** buttons to find it.

3. On the **Networking** page, manually add N0204 miniNAS IP address (i.e. 192.168.1.100) to the **Trusted** list.

Replacing Damaged Hard Drives

If you are using RAID 1, you can easily replace a damaged hard drive in the Thecus N0204 miniNAS while keeping your data secure with the system's automatic data recovery.

Hard Drive Damage

When a hard drive is damaged, LED will be become solid RED.

Replacing a Hard Drive

To replace a hard disk drive in the N0204 miniNAS:

1. Remove the tray with the damaged hard disk.

2. Insert the hard disk tray then slide into the N0204 miniNAS until it snaps into place.

3. The LED solid green when the HDD is accessed.

RAID Auto-Rebuild

When using RAID 1 on the N0204 miniNAS, you can use the auto-rebuild function when an error is detected.

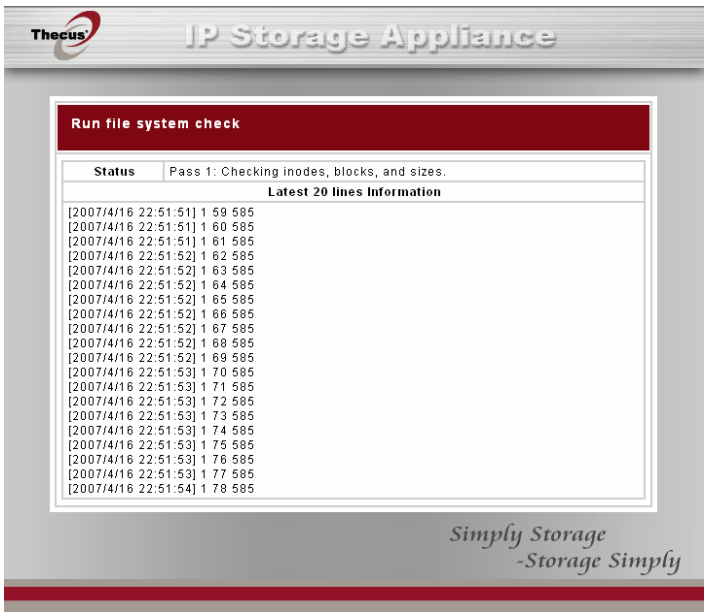
1. When a hard disk fails an email notification is sent to specified receivers.
2. Check the log message to see which disk has failed.
3. Follow the steps mentioned above to replace the failed hard disk.
4. The system automatically recognizes the new hard disk and starts the auto-rebuild sequence to resume its status before the hard disk crash.

File System Check

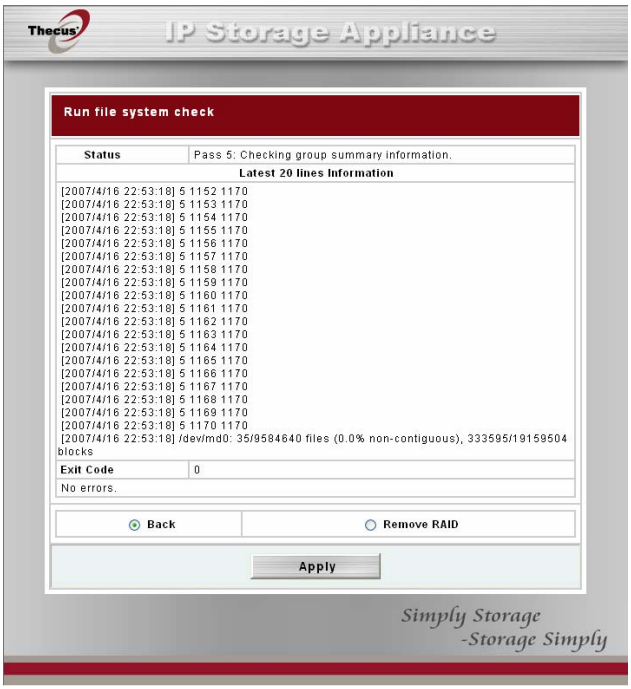
The N0204 miniNAS has a built-in utility that allows you to check the file system of N0204 miniNAS for errors. To use the File System Check utility, follow the steps below:

1. Copy the file – **singleusermode** from the **install CD** (Path: \\Setup Wizard\ Singleusermode) to any available USB disk at root directory. Note that; please don't put any other files in this USB disk.
2. Plug this USB disk into N0204 at front USB 2.0 port and then press the **USB copy button** on front panel. The system will reboot to temporary IP address - **192.168.1.100.** Please note that all file services at this time will be stopped.
3. Point your browser to **192.168.1.100**; you will see the following screen.

4. Select "**Run file system check**" option and click **Apply**, the file system checks utility will be started and last 20 lines of the result will be displayed in your browser.



5. When the file system check is finished, the result will be displayed in your browser.



NOTE If the file system is corrupted beyond repair, you may have to remove RAID and recreate the file system.

Chapter 8: Troubleshooting

Forgot My Network IP Address

If you forget your network IP address and have no physical access to the system, you can use the **Setup Wizard** to retrieve the IP of your N0204 miniNAS.

1. Start the Setup Wizard, and it will automatically detect N0204 miniNAS on your network.

2. You should be able to find the IP address of the N0204 miniNAS which you have forgotten in the **Device Discovery** screen.

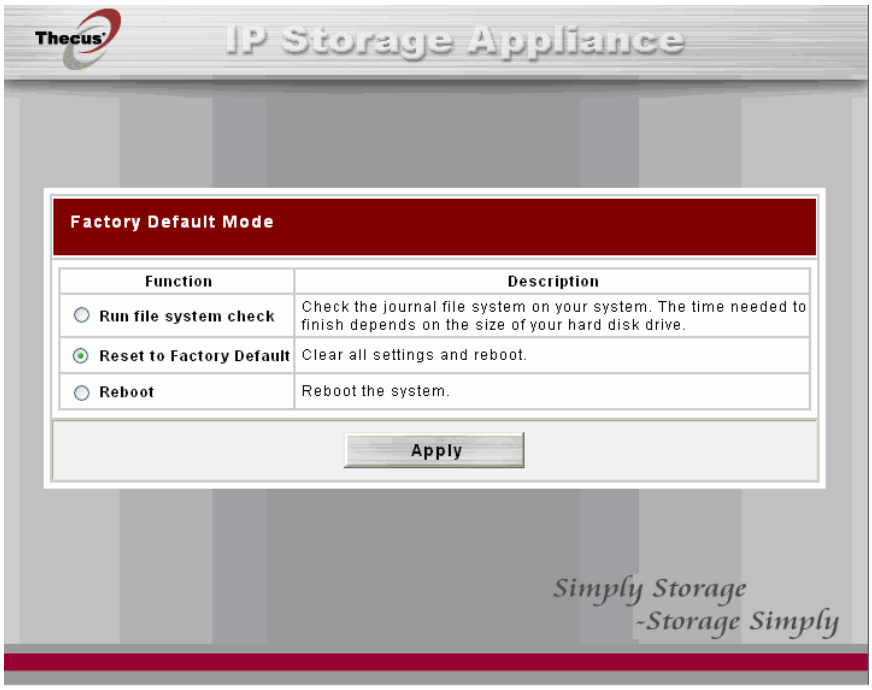
Resetting NAS IP Address and Admin Password

In case you changed the N0204 miniNAS IP address and then forgot it, or forgot the administration password, follow the steps below to reset to the default settings:

1. Copy the file – **Singleusermode** from the **install CD** (Path: \\Setup Wizard\ Singleusermode) to any available USB disk at root directory. Note that; please don't put any other files in this USB disk.

2. Plug this USB disk into N0204 at front USB 2.0 port and then press the **USB copy button** on front panel. The system will reboot to temporary IP address - **192.168.1.100.** Please note that all file services at this time will be stopped.

3. Point your browser to **192.168.1.100**; the **Factory Default Mode** screen will be appears.



4. Select **Reset to Factory Default** and click Apply.

5. Default IP: **HDCP**
   Default admin password: **admin**
   Jumbo Frame support: **Disabled**

Can't Map a Network Drive in Windows XP

You may have problems mapping a network drive under the following conditions:

1. The network folder is currently mapped using a different user name and password. To connect using a different user name and password, first disconnect any existing mappings to this network share.

2. The mapped network drive could not be created because the following error has occurred: **Multiple connections to a server or shared resource by the same user, using more than one user name, are not allowed.** Disconnect all previous connections to the server or shared resource and try again.

   To check out existing network connections, type **net use** under the DOS prompt. You may refer the URL below for more network mapping information: http://esupport.thecus.com/support/index.php?_m=downloads&_a=viewdownload&downloaditemid=57&nav=0

Restoring Factory Defaults

From the **System** menu, choose the ***Factory Default*** item and **the Reset to Factory Default** screen appears. Press ***Apply*** to reset the N0204 miniNAS to factory default settings.

WARNING

Resetting to factory defaults will not erase the data stored in the hard disks, but WILL revert all the settings to the factory default values.

Problems with Time and Date Settings

The administrator is able to select an NTP Server to keep the N0204 miniNAS's time synchronized. However, if the N0204 miniNAS can not access the Internet, you may encounter a problem when setting the Time and Time Zone. If this happens:

1. Login to the Web Administration Interface.
2. Navigate to ***System*** > ***Time***.
3. Under **NTP Server**, select ***No***.
4. Set the **Date**, **Time**, and **Time Zone**.
5. Click ***Apply***.

In addition, if the N0204 miniNAS is able to access the Internet and you want to keep the NTP Server clock.isc.org by default, please make sure the DNS Server is correctly entered, thereby allowing the NTP Server name to correctly resolve. (See ***Network*** > ***LAN*** > ***DNS Server***)

Appendix A: Product Specifications

Hardware Specifications

Item	Spec
Processor	Oxford 810DSE
SATA Controller	Oxford 810DSE
System Memory	128MB DDR2 on board
Flash memory	4 MB
LAN Interface	RJ-45x1 10/100/1000 BASE-TX Auto MDI/MDI-X
USB Interface	USB 2.0 host port x1 (Front) USB 1.1 host port x 1 (Rear)
LED indicator	Power(Blue) HDD1 Failed/Activity(Red/Orange) HDD2 Failed/Activity(Red/Orange) LAN (Link/Activity) : Green USB Copy: Blue
Power supply	15W External power adaptor
Disk interface	2.5” SATA x2 via backplane
Thermal control	System temperature status
Buttons	1. Power button 2. USB copy button
Chassis	Plastic and aluminum chassis
Environment	Temperature : 5C to 40 C Humidity : 0 ~ 80 % R.H. (Non-condensing)

Software Specifications

RAID	
RAID modes	RAID 0, 1 and JBOD
Auto-rebuild	Supported
Hot-swap	Supported
Network	
Configuration	Fixed IP Address, Dynamic IP Address,
Transport Protocols	TCP/IP, AppleTalk, UPnP
File Protocols	SMB/CIFS, HTTP/HTTPS, FTP,AFP
Wireless LAN	802.11b/g USB Dongle AP/Client mode Supported. AP mode (ZD1211x based)
Data Access	
Client OS support	Windows NT/2000/XP/2003/Vista Mac OS 9 / X
WebDisk	Web-based file access
FTP	File transmission protocol
Download Manager	HTTP / FTP / BT (MLdonkey)
Printer Server (IPP)	1. Support USB printers 2. Support IPP various printers 3. Client can manage print job queue on WEB interface
Data Backup	
USB copy (From external USB disk to NAS)	Copy USB Mass storage device contents to specified location to NAS
USB copy (From NAS to external USB disk)	Copy NAS data to external USB disk
NAS Remote Replication	Via Thecus proprietary Nsync
Multimedia Support	

iTunes Server	Supported File Types: AAC, MP3 w/ ID3 tag, WAV
Photo Web Server	1. Supported File Types: GIF, JPG (JPEG), BMP, PNG 2. Support EXIF display 3. Support slide show
Media server	Support uPnP AV streaming protocol
Web cam	Support Capture, preview, schedule Support image size : 160 x 120, 320 x 240, 640 x 480
User Authentication	
Local User	Supports built-in user accounts
Local Group	Supports built-in user groups
File System	
Type	Journaling File System
Capacity	1TB or above
Language Support	Unicode Support
Authorization	Read, Write or Deny options on individual users or groups
Power Management	
Disk Spin down	Supported
System On/Off schedule	Supported
Administration	
Multi-Lingual Web-based administration	Web-based server management Interface Supports English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish
Utility Program	MS Windows Setup Wizard, Support multilingual Support Windows 2000/XP/2003/Vista, Mac OSX backup utility
Email notification	Send the system messages via Email to the system administrator
Others	
ISO mount	Supported
Recycled Bin	Supported

**For supported USB dongles, please contact sales@thecus.com

Appendix B: Customer Support

If your N0204 miniNAS is not working properly, we encourage you to check out **Chapter 8: Troubleshooting**, located in this manual. You can also try to ensure that you are using the latest firmware version for your N0204 miniNAS. Thecus is committed to providing free firmware upgrades to our customers. Our newest firmware is available on our Download Center:

http://www.thecus.com/download.php

If you are still experiencing problems with your N0204 miniNAS, or require a Return Merchandise Authorization (RMA), feel free to contact technical support via our Technical Support Website:

http://www.thecus.com/support_tech.php

Customers in the US should send all technical support enquiries to this email address:

support-us@thecus.com

For Sales Information you can e-mail us at:

sales@thecus.com

Appendix C: RAID Basics

Overview

A Redundant Array of Independent Disks (RAID) is an array of several hard disks that provide data security and high performance. A RAID system accesses several hard disks simultaneously, which improves I/O performance over a single hard disk. Data security is enhanced by a RAID, since data loss due to a hard disk failure is minimized by regenerating redundant data from the other RAID hard disks.

Benefits

RAID improves I/O performance, and increases data security through fault tolerance and redundant data storage.

Improved Performance

RAID provides access to several hard disk drives simultaneously, which greatly increases I/O performance.

Data Security

Hard disk drive failure unfortunately is a common occurrence. A RAID helps prevent against the loss of data due to hard disk failure. A RAID offers additional hard disk drives that can avert data loss from a hard disk drive failure. If a hard drive fails, the RAID volume can regenerate data from the data and parity stored on its other hard disk drives.

RAID Levels

The Thecus N0204 miniNAS supports standard RAID levels 0, 1 and JBOD. You choose a RAID level when you create a system volume. The factors for selecting a RAID level are:

- Your requirements for performance
- Your need for data security
- Number of hard disk drives in the system, capacity of hard disk drives in the system

The following is a description of each RAID level:

RAID 0

RAID 0 is best suited for applications that need high bandwidth but do not require a high level of data security. The RAID 0 level provides the best performance of all the RAID levels, but it does not provide data redundancy.

RAID 0 uses disk striping and breaking up data into blocks to write across all hard drives in the volume. The system can then use multiple hard drives for faster read and write. The stripe size parameter that was set when the RAID was created determines the size of each block. No parity calculations complicate the write operation.

RAID 1

RAID 1 mirrors all data from one hard disk drive to a second one hard disk drive, thus providing complete data redundancy. However, the cost of data storage capacity is doubled.

This is excellent for complete data security.

JBOD

Although a concatenation of disks (also called JBOD, or "Just a Bunch of Disks") is not one of the numbered RAID levels, it is a popular method for combining multiple physical disk drives

into a single virtual one. As the name implies, disks are merely concatenated together, end to beginning, so they appear to be a single large disk.

As the data on JBOD is not protected, one drive failure could result total data loss.

Stripe Size

The length of the data segments being written across multiple hard disks. Data is written in stripes across the multiple hard disks of a RAID. Since multiple disks are accessed at the same time, disk striping enhances performance. The stripes can vary in size.

Disk Usage

When all 3 disks are of the same size, and used in RAID, N0204 miniNAS disk usage percentage is listed below:

RAID Level	Percentage Used
RAID 0	100%
RAID 1	50%
JBOD	100%

Appendix D: Licensing Information

Overview

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Source Code Availability

Thecus Technology Corp. has exposed the full source code of the GPL licensed software. For more information on how you can obtain our source code, please visit our web site, http://www.thecus.com.

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- This product includes cryptographic software written by Eric Young (eay@cryptsoft.com).
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